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The Educator and the State University

Faculty Views on the Recruitment of College Teachers

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CONTENTS

The Educator and the State University
John Harold Wilson 237

Faculty Views on the Recruitment of College Teachers
Ruth E. Eckert 244

A Method of Measuring Individual Student Progress
Leo A. Haak 252

Where Will the Money Come from? *M. M. Chambers* 257

What the Colleges Want from the High Schools
Andrew L. Pincus 263

The Longmont Experiment
Walter D. Weir and Marc Ratner 270

SHORT CONTRIBUTIONS

My Museum of Morbid English	*Robert L. Coard*	276
The Profession of College Teaching	*Paul Woodring*	280
A New Degree for College Teachers	*Everett Walters*	282

EDITORIAL 285

THE REPORTER 287

REVIEWS	REVIEWER	
Reading for Life	*W. W. Watt*	289
The Biological Way of Thought	*William L. Doyle*	290
Who Goes to Graduate School?	*Herman E. Spivey*	291
College Testing: A Guide to Practices and Programs	*Wilbur L. Layton*	293

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JOURNAL OF HIGHER EDUCATION Vol. XXXI No. 5 May, 1960

The Educator and the State University

The Abdication of Responsibility

By JOHN HAROLD WILSON

TO THE historian, a university is a company of scholars and students engaged in a common enterprise: the search for truth and the liberation of the human mind from the bonds of ignorance and prejudice. Ideally, a state university—a cluster of trade schools and professional colleges grouped around a college of liberal arts, serving the state and supported by state funds—should conform to this definition. But the American state university differs radically from the ideal. Typically American in its bigness, its vocationalism, its energy, and its dedication to a truly noble idea—advanced education or training for the millions—it is smugly unconcerned about what it is doing and where it is going.

So many and so varied are the functions of the state university that no man can tell you what it is or what it stands for. Ostensibly an institution of higher learning, it deals in both training and education, and offers courses appropriate to a vocational high school or a technical institute side by side with humanistic studies on the highest possible level. With one hand it fosters pure research in the sciences and humanities, and with the other it signs profitable contracts for applied research with industry and government. It provides services for agriculture, business, government, the armed forces, primary and secondary schools, police departments, and professional sports. It provides public entertainment

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with games, radio, television, music, and plays; with quaint and curious traditions; and with the solemn foolery of commencements: the massed graduates in rented black gowns, and the sheepish professors in gowns and colorful hoods smelling of moth balls. It has colleges, schools, institutes, experimental grade schools and high schools, extension schools, experiment stations, research bureaus, hospitals, airfields, print shops, powerhouses, testing laboratories, cyclotrons—and even some classrooms. At one Midwestern state university, eighty-four departments of instruction offer more than four thousand courses in almost every conceivable subject: from welding to theoretical physics; from home management to military logistics; from canoe-paddling to the analytical dynamics of astronautics; from sports-officiating to jurisprudence; from sausage-making to plastic surgery; and from pottery to poetry. The number increases annually as departments continue to proliferate and pressure groups demand ever more and more specialized courses: garden clubs want courses in flower-arranging; playground supervisors want courses in campcraft (boy-scout skills for college credit); transport companies want practicums in truck-driving; and undertakers want an institute of mortuary science—truly an educational dead end.

In this vast hurly-burly, this booming, buzzing confusion called a great state university, an institution occupied with achieving mediocrity for the millions, the serious student who wants learning for its own sake is commonly at a loss for guidance and direction. Fortunately, a still-saving number of such students, often by mere good luck, manage to acquire some measure of knowledge and even learn to think for themselves, a process which is the beginning of wisdom. But the great mass of undergraduates, those who go to college only to increase their earning power, amble without a thought through the ivied halls of academe and go forth, at last, hidebound anti-intellectuals, with their prejudices intact and their ignorance undented.

Such students conceive of a university as a cafeteria, a gigantic feeding station, with comestibles to suit every possible taste or diet. The typical student lines up daily at a counter where white-capped instructors ladle out piping-hot measures of their own special dishes according to a menu called a curriculum. Day after day, belching with frenetic flatulence, the student heads back for the same counter, passing up a wealth of other rich and varied dishes. After four years of a special, and sometimes costive, diet, the student has, in his own words, "got an education," and goes forth, fat in body and head, long on know-how and short on wisdom, forever through with all learning, and armored in triple brass against the dangers of a new idea.

HOW did our state universities come to this pass? Who is to blame, and what, if anything, can be done about it?

In their moments of despair, pessimistic educators, faced with what they consider the sickness of higher education, tend—very humanly—to pass the buck and to blame any number of scapegoats. They blame,

for example, the pursy materialism of the American people. "After all," they argue, "the state universities have to give the public what it wants." They blame the grade schools and high schools for turning eager young searchers after truth into blasé playboys or dense-minded vocationalists. They blame progressive education, with its slogan "We teach the student, not the subject." They blame university boards of trustees—lawyers, politicians, and industrialists—many of whom know nothing, and care less, about the true aims of higher education. They blame university presidents, chancellors, provosts, and deans, gentlemen who are, indeed, all too often professional administrators rather than educational leaders, chiefly concerned, as one university president said facetiously, "with sex for students, football for the alumni, and parking places for the faculty." The educators blame everyone but themselves, and yet it is they who are chiefly to blame; for although a university is made up of many components—its faculty, administration, students, and alumni, its history and traditions—in the long run it is the faculty who do most to make it what it is.

The fact is that we have come a long way from the ideal of a company of scholars and students engaged in the search for truth. As the result of the lush and weedy growth of universities in the last fifty years, plus the addition of vocational skills and the subdividing of knowledge into dozens of specialties, the faculty of a state university is no longer a company; it is a multiplicity of companies, as many as there are departments or disciplines. We have cut the university pie into crusty segments, each containing a different filling, and it may well be that all our best efforts will never put it together again. All too many teachers are only titular members of the university faculty or even of the college in which their department is budgeted. With rare and notable exceptions, the teacher is a member of an entrenched department or bureau, a small enclave in a foreign land, a high-walled cell without windows. Appointed to membership on a university committee, he is likely to emerge from his cell resentfully, blinking in the campus sunshine. What goes on in other departments, he argues, is none of his business; and what goes on in his department is nobody else's business. He rarely sees the members of other enclaves, and when he does—say at lunch one day at the faculty club—the technical jargon which he commonly talks is so obscure that he cannot communicate. Every department is a semi-autonomous republic, with its own laws and its own language; and a university is now a league of nations lacking instantaneous translators.

In addition, educators have lost the concept of dedication and of the scholar as one devoted to the pursuit of learning, the search for truth for its own sake. Today our faculties are committed to research, a word so loose that a high-school student is said to do research when he reads an article in an encyclopedia, and a graduate student can get the degree Doctor of Philosophy—which means teacher of the love of wisdom—for collating the answers to a questionnaire on the number of backhouses in country schoolyards. In most universities, the scholar-

teachers are now only a small minority. Because of giantism and cafeteria education, the majority is composed of practitioners and technologists, able men and well-qualified, but concerned, not with true education, but only with the training of more practitioners and more technologists in their own images. Education is dominated by the ideal of "employability" for the product; research, by the ideal of utilitarianism.

WHATEVER their differences, scholars, practitioners, and technologists are alike in giving their devotion first to their own discipline, and only as a very poor second, if at all, to university education. The members of any department tend to talk together, lunch together, drink cocktails together, and band together—in arrogance or xenophobia—against all outsiders. As educators, they have lost their sense of proportion. Each professor tends to think of his discipline as the only subject of real value. "Let others teach students to read and write," he is likely to say, "or to think in abstract terms, or to reflect on moral problems, or to ponder the international scene. My job is to teach them my discipline, a hard, rigorous, time-consuming discipline, so difficult that they really shouldn't be wasting their time on other subjects which, since they have no bearing on my discipline, are trifling. As for the university—well, that's the business of the president and the deans. Educational ideals? Are you suggesting that I have no ideals? Get out of here and leave me to my students and my important research."

In brief, the faculties of most of our state universities have abdicated. They have given up their prime responsibility as educators, whose function it is to cultivate their students mentally and morally, and have dwindled into purveyors of a specialty. Academic ideals, policies, and problems they have turned over to university administrators, whom they tend to look upon with contempt.

These are not overstatements. I could cite dozens of examples from my own and other state universities: the fact, for instance, that many departments are interested only in those students who are preparing for graduate work in their special disciplines; the flat fiat of some departments that academic promotion is to be based solely on specialized research and publication; the example of a science department which for years forbade its members to accept appointments on college and university committees; the case of the chairman of a humanities department who objected to submitting his curriculum for the approval of college and university councils, insisting that it was none of their business; or of another science department which blandly told a member that if he accepted a part-time job in university administration, he could never hope for academic promotion; or of a social-science department which, in effect, ordered a successful teacher to spend less time on his teaching and more on research; or of a humanities department in one university which argues that if a member writes a book he is cheating his students, whereas the head of a comparable department in another university is

quoted as saying to an aspirant for a job, "So you like to read books, huh? Well, in my department we don't read books; we write 'em." Balance, proportion, and perspective are lost; every splinter group is a law unto itself.

Having made my diagnosis, I should be able to offer a cure, a neat and simple panacea. But the sickness of American higher education cannot be cured by easy prescriptions: by more money, or a change in the system, or a new set of scholastic requirements, or some more councils, committees, and co-ordinators, or the arbitrary actions of presidents and boards of trustees. The cure, if it comes at all, must come from a change in the spirit of the educator himself. As one who saw all too late what was happening, I can offer only the painful advice of an old physician who could not heal himself.

IN THE course of time, you, the graduate students of today who choose to become educators, will go forth duly certified to positions in institutions of higher learning. If you land in a large state university, you will see at first only the smallest segment of the educational picture. For a year or so your vision will be limited to your office, a few classrooms or laboratories, and a small group of students. Almost before you have had time to look around, your department will begin to absorb and digest you. Its members will be your friends and models; the department's peculiar brand of provincialism, its tastes, attitudes, and prejudices, will become yours. And if the dominant motif of your department is dogmatic professionalism, you, too, will become a narrow specialist, indifferent or hostile to the broader aims of higher education.

I urge you to beware of what may happen and to fight against it as well as you can. The pressure to conform to the standards of your group will be well-nigh irresistible. In many departments your entire career may depend upon your—at least outward—conformity, and in most departments a maverick is as unpopular as in a political party or a herd of purebred cattle. But perhaps if you keep in mind an ideal of your responsibilities as a teacher, you will be able to overcome the forces aligned against you.

Let me remind you that you will bear the proud name of educator—a name not to be confused with educationist, a specialist in the methods of pedagogy. You will be, I hope, an educator first, and only secondarily a chemist, biologist, linguist, or historian. As an educator, you will have three equal and inseparable functions: to teach, to learn, and to counsel. Your responsibility will be first, last, and always to the students entrusted to your care.

This is not to say that you should spend all your time with your students. Far from it. The skillful and experienced teacher in a large university who spends more than, say, thirty hours a week in teaching contacts with his students—classes, conferences, paper-grading, and counseling—should take himself severely to task. He may be inefficient,

or wasting his time on hopeless incompetents, or merely too fond of sitting and talking. And at best he is fulfilling only one of his three time-consuming functions.

As a good university educator, you must also be a learner, an investigator, a scholar—a researcher, if you will—always charging your own batteries so that your students will have a constant potential to tap. In all large universities the teaching load is kept as light as possible—usually 6 to 12 hours a week as compared to 15 to 18 in the smaller universities—so that the teacher will have the time to acquire more learning. The good educator studies, investigates, learns, and publishes, not because he is ordered to do so, not because research and publication will bring promotion, but because he is an educated man, gifted with a lively curiosity, eager to learn, eager to communicate, and eager to submit himself to the discipline of writing. He cannot know what he really thinks until he has marshaled his thoughts in orderly prose.

As a good educator, you will also be a counselor to your students and your department. Obviously, you will be expected to advise your students on their work in your discipline, but in addition you should be able to advise them on the studies they will need for a liberal—which is to say liberating—education as well. Therefore you will have to learn what is going on elsewhere in the university world. In your own department, as you mature, you will be expected to have ideas about the betterment of your group and its work, ideas which you will set forth with modesty and defend without rancor.

BUT this is not all. You must consider that when you have finished your term of apprenticeship—usually three or four years with "up or out" at the end—and have been accepted as a full-fledged career man with tenure, you will be the peer of your associates of whatever rank or title. Forget the academic labels, the hierarchical nonsense so dear to the formalists, pedants, and status-seekers, and think instead that you will stand in relation to your president much as a member of the English peerage used to stand to his king, who always addressed him as "beloved cousin and counselor." When you don your robes as a full member of a university faculty, you will belong to a House of Educators; a wise president, admitting your equality, will address you as "dear colleague" and seek your counsel.

As a seasoned educator, then, you will also be a university counselor. If you become fully aware of this function and seek earnestly to exercise it, you will no longer be merely department-minded; you will become university-minded. You will come to see that what goes on in another department is decidedly your business, just as what goes on in your department is the business of every other educator on the faculty. Therefore you will learn all that you can about your institution and its activities, and with long experience and much thought you will acquire the wisdom and judgment so necessary to a good university man. You

will serve willingly on college and university committees and councils; you will accept gladly election to legislative bodies—the faculty senate, or the graduate council, or the college executive committee—and you will do all in your power to advise and assist college and university officers, most of whom will be delighted to have you take a constructive interest in their work.

If you continue to hold fast to this ideal—one which my generation has forgotten—you will have reason to bear with pride the title of educator: teacher, scholar, and counselor. When university faculties are staffed by such educators—each soberly thinking of the good of the whole instead of selfishly concentrating upon his own narrow interests, and each concerned with cultivating his students both mentally and morally—then, I believe, the sickness of higher education will pass away, and the state universities will truly deserve to be called great. And that they need to be great no one can deny. The fires of ideological warfare are already blazing; technologists and practitioners cannot put them out. The Western world needs educated, thoughtful, moral men—scholars and students engaged in the search for truth—even more than it needs physicists and engineers. Gadgets alone will never win the greatest of all wars for the freedom of the human mind.

IF YOU protest that I have set up for you an impossible standard, I can only reply that teaching is a high calling, not a profession for dilettantes or self-seekers. If you argue that you can't possibly find the time to fulfill all the duties I have listed, I will remind you that there are still twenty-four hours in a day, and that as graduate students you have learned to get along on very little sleep. All you have to do is to keep it up for the rest of your life.

Faculty Views on the Recruitment of College Teachers

A Report Based on a Questionnaire and Interview Survey

By Ruth E. Eckert

SHORTAGES in qualified staff are already causing grave problems on college campuses, and the tug of war between supply and demand promises to become more acute yearly. Unless American institutions of higher education can recruit and retain far larger numbers of able staff members, the quality of teaching and of other faculty services is bound to suffer. The pursuit of excellence in any college or university depends basically on a sufficient supply of scholar-teachers to act as challengers and guides to students, to search after new truth, and to translate knowledge into service.

A recent study of faculty members in Minnesota's thirty-two colleges throws light on the reasons these individuals decided to become college teachers, their present attitude toward their jobs, and their ideas concerning the best means of recruiting more candidates to academic careers.[1] This article, which is concerned with the problem of attracting and retaining competent staff, is based on responses to a four-page printed questionnaire filled out by 706 faculty members (constituting 94 per cent of a random stratified sample of the full-time academic staff in the institutions surveyed) and on interviews with 87 respondents (a random sample composed of 15 per cent of those who returned questionnaires). Although the interviews aided in checking factual data gathered through the questionnaires, their primary purpose was to assess subjective attitudes.

Since the sample was drawn from all types of colleges—public and private, large and small—and from all academic ranks and teaching fields, it should be representative of the profession at large. This was borne out by a comparison of the findings on some items with national statistics, for 70 per cent of the participants were men, 44 per cent held earned doctorates, and their median age was forty-four years. Findings regarding their motivations for college teaching and the degree of satisfaction they found in it also harmonized with studies made elsewhere.

[1]Findings from the questionnaire phase of the study have been reported in general outline in John E. Stecklein and Ruth E. Eckert, "An Exploratory Study of Factors Influencing the Choice of College Teaching as a Career" (Minneapolis: University of Minnesota, Bureau of Institutional Research, 1958). This study was conducted under a grant from the Co-operative Research Program of the U. S. Office of Education.

Ruth E. Eckert *is a professor of higher education at the University of Minnesota.*

Hence the views they expressed concerning faculty recruitment and retention may suggest how college teachers in general regard the task of building a staff adequate to tomorrow's challenges.

The faculty members questioned in this study showed no tendency to minimize the critical situation that American colleges face in the effort to find qualified staff members. Since their own departments and colleges were already wrestling with these problems, many of them spoke from direct experience. As one commented,

> Our department has explored housewives, retired teachers, people whose husbands are on the staff or nearly on the staff, former teachers, and all kinds of people, and we simply can't find anybody . . . . We are getting desperate about what to do next year (Home Economics).[2]

In the opinion of these college teachers, some of the most formidable obstacles lay in conditions beyond the college's direct control. Thus they repeatedly spoke of the unfavorable environment in which recruitment efforts must operate.

> The better publicity [for college teachers] now on radio and TV is in the next breath contradicted by a more subtle belittling and making fun of college teachers in various types of entertainment programs (Industrial Arts).

Some spoke of "the business orientation instilled in students by their families" and of the need to "help top-ranking students get the dollar signs out of their eyes" before teachers can hope to interest them in college teaching. An Indian educator observed that "the social attitudes in this country are very much against getting good people to enter and stay in this field."

However, these faculty members suggested many things that higher institutions might do to attract candidates to teaching. Comments made on open-ended questionnaire items and in the interviews pointed up the need for a number of reforms, including the establishment of basic means for publicizing academic careers, the initiation of many improvements in the working conditions and general atmosphere on college campuses, and the organization of more adequate systems of recognition and rewards for service. These recommendations, which are summarized in Table I, manifest the faculty's concern that a climate of opinion and expectation be created in which recruiting efforts will thrive.

IN SUGGESTING measures that might aid in staffing college programs, the faculty members urged a wider search for qualified persons, better counseling and training for potential candidates, and broader programs of scholarship aid (see Column 1 of Table I). Many teachers recommended that undergraduate students be given more information about academic careers so that they could compare the assets and liabilities of faculty service with those of other fields that compete for high-level talent.

[2]The persons making comments will be identified by department but not by rank or college.

Several teachers urged that the colleges "proselytize for the social studies and humanities in some of the same ways in which this is currently being done for science and mathematics." A few others suggested that departments of education give more publicity, perhaps in undergraduate education courses, to the need for college teachers and to the advantages of this career. Interestingly enough, these ideas came from faculty members in liberal arts and the professional fields rather than in education.

TABLE 1

FACULTY RECOMMENDATIONS FOR THE RECRUITMENT OF STAFF

Suggested Measures	Per Cent of Faculty in Four-Year Colleges Making the Recommendation N=576	Per Cent of Faculty in Junior Colleges Making the Recommendation N=130
(1)	(2)	(3)
Better Recruitment and Preparation		
Broader publicity concerning the academic life	21.0	21.6
More scholarships and financial aids	20.0	16.2
Better "selling" efforts by teachers	11.9	13.8
Better counseling and guidance	12.8	12.3
Better pre-service–training opportunities	4.3	4.6
Other responses	5.6	5.4
Program Adjustments		
Lighter work loads for teachers	9.2	8.5
More time and money for research	7.3	4.6
Improved working conditions	7.0	3.8
Stress on quality of classroom teaching	3.5	3.8
More clerical and other help	2.3	3.1
Other responses	11.6	16.9
Increased Rewards		
Higher salaries	59.7	54.6
More prestige for college teachers	5.4	7.7
More recognition of good teaching	3.1	6.2
Better security (tenure, retirement, and so on)	8.7	5.4
Other responses	8.1	4.6

Almost all of the teachers agreed that the process of recruitment should be a selective one, focused on students who give promise of becoming effective scholars and teachers. Some also noted that resources of talent are lost because outstandingly able women are not recruited. Others spoke of the need to create a livelier intellectual climate on the local campus if able students are to be attracted to careers as scholars and teachers.

Although faculty members suggested various specific times in the life of the student at which special recruitment efforts would be most appropriate, they were nearly unanimous in stressing the need for giving early attention to this matter. Some even advocated campaigns to interest children and adolescents in college teaching, similar to those conducted to recruit future engineers, doctors, and other professional groups.

> The high school is the crucial level at which to begin to recruit college teachers, first by making liberal studies available and then by teaching them very well—so interestingly and stimulatingly that enough good students catch fire, from whom colleges can pull those that ought to become college teachers (Classics).
>
> Catch these people—the *best* students—while young, before their families get used to a certain economic level (Law).
>
> The only way to get college teachers out of graduate engineers is to induce them to go on immediately to graduate school . . . . If they get out into industry, you will rarely get them back into teaching (Mathematics).

Whereas faculty members in smaller colleges emphasized recruiting at the undergraduate level, university staff members placed more emphasis on recruiting from the graduate-school ranks. Several persons interviewed at the state colleges suggested that recruiters try to interest high-school teachers with three to five years' experience in the possibility of college teaching.

Teachers themselves were urged to take a more active role in the recruitment process, using their contacts with students and their influence in the community to interest likely candidates in this field.

> This has to start with faculty members themselves. They have to take themselves seriously, not only in terms of salary, but of the product they deliver (Speech).
>
> Teachers are often their own worst enemies, and by their attitudes often set back any progress we might make toward increasing respect for the profession (Industrial Arts).
>
> Encourage the staff to display more enthusiasm for teaching (Agriculture).
>
> The greatest encouragement that a teacher can give is to present to the student the dignity of being interested in his own field and of being a good teacher himself (History).

The faculty members who were interviewed expressed many ideas concerning the best methods of recruiting, including two techniques that had not been brought out clearly in the questionnaire study. The first suggestion was that the best way to get students interested in teaching was to let them try it.

> The best way to interest people in college teaching is to give them a taste of teaching . . . to get them acquainted in a really personal way with the inner workings of the department and the people who staff it (Agricultural Science).

Apparently, this approach, which was being used in some of the undergraduate colleges at the time of the study, is working out quite successfully. A veterinary-school professor described such a plan for advanced students which was in effect in his division: after their first year, graduate stu-

dents are turned loose on classes and observed carefully. Only those who show an aptitude for it are encouraged to go into college teaching; the others are steered into research. The second suggestion made during the interviews was to help students learn to know college teachers as persons by inviting them to faculty homes and letting them see how teachers live and what freedom they enjoy.

> Establish closer personal relationships between faculty and students so as to "sell" the academic way of life to the best, brightest, and most well-balanced students (Law).

> Students who attend small colleges are fertile sources of supply for graduate schools and college teaching jobs because they get to know, love, and admire their own teachers more than students do in the big universities (Psychology).

A few faculty members reported organized efforts in their schools to recruit able students by such means as instituting a "graduate day" to which promising students from all over the state are invited to discuss career opportunities in college teaching and research. A physiology professor commented that his department had recruited a number of able undergraduate students to graduate study and college teaching by offering them summer jobs in the department.

Occasionally, faculty members spoke of the need for better training programs for persons planning to teach in college, suggesting that "some type of teaching Ph.D." should be developed for individuals who will be primarily concerned with undergraduate instruction. One professor of classics said that he "would have welcomed a real internship on how to teach"; but in general, faculty members made few suggestions regarding pre-service training programs, perhaps because no specific questions were asked about them.

Direct financial help to prospective college teachers was also proposed by a number of faculty members, who sometimes cited examples of what their own departments were doing to secure scholarships and fellowships for their ablest students. Several teachers also mentioned regretfully the time that they themselves had lost on odd jobs required to finance extended graduate study.

> The cost of graduate education is a real stumbling block for people who might otherwise be interested in going on to college jobs. . . . (Psychology).

IN THE judgment of the faculty members questioned, efforts to build the teaching staff may not be successful unless certain prevailing conditions that afflict college teachers are corrected. Although essentially the same factors were specified in connection with recruiting new teachers (see Table I) and retaining present faculty members (see Table II), the need to make internal adjustments that would provide a favorable climate for teaching received more emphasis in regard to the retention of competent

staff members. A primary concern was with staff loads, which were judged to be far too heavy for good teaching, serious research, and scholarly writing. Of all the persons interviewed, an English teacher was the only one who said, "I never have to take any work home."

> The total responsibilities of college teachers are too great . . . . Administrative officers never seem to count all the extra things that are included, such as advisory responsibilities (40–50 students), committee assignments, and administrative duties (Elementary Education).

Insufficient time for research and writing was a frequent subject of complaint. A number of university teachers, for example, suggested

TABLE II

FACULTY RECOMMENDATIONS FOR THE RETENTION OF STAFF

Suggested Measures	Per Cent of Faculty in Four-Year Colleges Making the Recommendation N=576	Per Cent of Faculty in Junior Colleges Making the Recommendation N=130
(1)	(2)	(3)
Program Adjustments		
Lighter work loads	18.9	17.7
Better atmosphere for work	12.2	12.3
More time for research	13.7	3.1
More time for study and preparation	5.2	3.1
Better facilities for research and teaching	6.2	6.1
Other responses	6.3	6.9
Faculty-Administration Relations		
Greater academic freedom and encouragement	7.7	7.7
More policy-making by the faculty	7.8	0.8
Better communication	5.7	2.3
More co-operative or competent administrators	3.7	0.8
Other responses	5.8	3.1
Increased Rewards		
Higher salaries	70.5	71.6
Increased prestige for college teachers	4.0	6.9
More recognition of good teaching	6.3	9.2
More security and fringe benefits	12.1	10.0
Increased provisions for study leaves	4.9	3.8
Promotions and other recognition based on merit	13.0	8.5
Commendation for individual achievement	5.2	3.1
Other responses	4.7	7.7

that colleges operate on a four-quarter year, every teacher receiving one quarter's leave of absence to do personal research and other creative work. Another recommendation aimed at reducing incidental responsibilities was that college faculty members be provided with the clerical, secretarial, and janitorial assistance needed for effective work. Full professors complained that routine tasks mortgaged hours needed for their actual teaching duties and for independent study and writing. They also felt keenly that the lack of attention paid on some campuses to the faculty's parking problems resulted in the waste of many valuable hours.

> I find myself typing my own letters if they must go out in a hurry . . . sometimes I also have to run the hectograph machine (Dietetics).
>
> I have had to use my limited student help to keep the laboratories in order because the janitorial assistance is so poor in our school (Physics).

A few persons suggested programs of in-service education as a means of increasing the teaching efficiency and satisfaction of the staff.

Several comments which were related to the administration of particular schools emphasized the need for "more administrative control by the faculty as a group" and the importance of giving teachers the assurance that the administration would resist "parochial and McCarthy-like pressures from the community." Administrators were also counseled to help the staff improve its teaching performance, and a few critics urged that college teachers be given more freedom to plan their present courses and to design new ones. Only an occasional faculty member was as bitter as the sociologist who commented that "teaching is something which must be done in spite of the administration rather than with its assistance."

IN BOTH the questionnaire and interview reports, most faculty members gave priority to the need for raising salaries as a means of attracting new staff and holding those already in service. In addition, they hoped to see members of the profession granted greater job security, more fringe benefits, a decent retirement income, promotion on the basis of merit, and wider public recognition. Salary advances were specified as essential in recruiting new teachers by 60 per cent of the teachers in the four-year colleges, and as a means of holding qualified teachers by 70 per cent.

> There may be some idealistic youngsters left to whom you can list the intangibles of college teaching, but they are few and far between. Therefore it comes back to the necessity of offering more money (Communications).
>
> Set considerably higher salaries at the teaching-assistant and instructor levels to encourage able students to seek higher degrees. Their association with outstanding teachers will then help sell the advantages of continuing in a teaching career (Literature).

Several others commented on the need for "increasing fringe benefits in the nature of tax rebates," "setting up more lenient and liberal policies on sabbaticals and opportunities for further study," "assuring better retirement pay," and the like. As one teacher in mechanical engineering noted, "You can't change the man who is firmly established in a good job in industry and get him back in teaching just for an equivalent salary." Still others spoke of the need to correct "the college teacher's lack of social position in a society which is practical and scientific-minded these days."

THE concern that these faculty members voiced when they talked or wrote about the recruitment of new staff members reveals a good deal concerning their own attitudes toward their jobs. Certainly, the foregoing comments suggest that although most of them are proud and satisfied with their roles as faculty members, much could be done to improve their lot. They recognize that there has been little planned recruitment to their ranks, and that the conditions of hiring, promoting, and rewarding teachers have not been conducive to retaining qualified people and making full use of their talents.

Despite these handicaps, however, the vast majority of those now in the field are glad that they chose to become college teachers;[3] many report that they have found the academic life highly satisfying. The satisfactions that teaching affords, however, are usually experienced only after some years in the profession. By and large, faculty members doubt that they can be effectively communicated to students as an inducement to enter teaching without a well-planned and well-executed program to interest them in careers in this field, without essential improvements in the conditions of service, and without substantial increases in salary. A society that urgently needs many varieties of educated talent must find better ways of honoring and rewarding its major producers.

[3]Stecklein and Eckert, *op. cit.*, p. 26.

A Method of Measuring Individual Student Progress

The Significance of the Improvement Factor

By Leo A. Haak

MOST instructors favor the use of achievement as the main, if not the sole, basis for assigning grades. However, some will grant that it is desirable to take progress into consideration, providing that it can be measured satisfactorily. They recognize that three typical students who made the following grades on four non-overlapping tests in a given course may be significantly different:

TABLE I

Grades Received by Three Students on Four Tests

Student	Grades Received			
	Test 1	Test 2	Test 3	Test 4
(1)	(2)	(3)	(4)	(5)
L	*A*	*B*	*C*	*D*
M	*B*	*B*	*B*	*B*
N	*D*	*C*	*B*	*A*

Many instructors will assign a *C* to student L and a *B* to students M and N. Some even consider N the best student of the three because he has made the greatest progress in the course. Even the students who believe that progress should be taken into consideration when grades are assigned usually grant that it is difficult to do. They are aware of a serious defect in the pre-test, post-test system, namely that it is possible to do less than one's best on the pre-test in order to make a better showing later.

During the past several years the writer has developed the following method of measuring individual progress in his social-science classes in the Basic College at Michigan State University. From the objective tests given weekly during the term, the most discriminating and difficult items are selected for inclusion in a review test given at the end of the term. The students are aware of this practice, and know that the score made on the review test will affect their grades. Since the review test contains only 30 items as compared with the 240 items scored on the regular course tests, the student cannot deliberately make a poor showing without seriously jeopardizing his grade. It should be recognized that

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this method attempts to measure progress, not from the beginning, but merely from a number of fixed points, to the end of the course. The use of weekly tests makes as many fixed points as weeks in the term.

Specifically, the students had an opportunity to study the 120 multiple-choice and 240 true-false items used in the weekly tests. They were urged to think through the implications of each question, not simply memorize the questions and answers. In the case of the true-false questions, which were given to the students to keep, it was suggested that they rewrite all "false" items and thus have 240 true statements to incorporate in their notes on the course.

Progress is determined by comparing the scores made on the review test with the scores made on the same items when they appeared on the regular class tests during the term. In order to make the data comparable, the rate of improvement was estimated by dividing the actual improvement by the possible improvement. Thus if a student missed 10 of the 30 questions on the regular tests and 5 on the review test, his progress would be 50 per cent; that is, 5 divided by 10. Similarly, if he missed 20 of the 30 questions on the regular tests and 10 on the review test, his actual progress would be 50 per cent also. He would make 100 per cent progress if he got all items right on the review test, no matter how many he missed on the weekly tests. At the other extreme, it would be possible to get zero if he made no improvement, or even a minus score if he answered correctly fewer questions on the review than on the regular tests.

THE significance of the improvement factor and the way in which the system works can be illustrated by data gathered during the winter quarter of 1958. For the purposes of this presentation, only the polar extremes will be examined. Since complete data were collected for 80 students, the 16 students (20 per cent) who made the greatest improvement during the term will be compared with the 16 who made the least progress. For purposes of simplification, the two groups will be referred to as I and II respectively. Group I made an average gain of 80 per cent, whereas II, whose members actually answered correctly fewer questions on the review than on the regular tests, showed a net loss of 9 per cent.

When the progress factor is not included in the instructor's grade, the performance of these two groups on the departmental final[1] and on the instructor's tests was as follows: Group I scored a grade-point average of 2.63 on the weekly class tests and 2.69 on the departmental final; Group II scored 1.81 on the weekly tests and 1.75 on the final ($A=4$ points, $B=3$, and so on). It will be noted that Group I scored

[1]In the basic courses at Michigan State University, the student's final grade is determined by his instructor's evaluation of his work and by his performance on a uniform departmental examination prepared by a committee of the department with the assistance of specialists in the Office of Evaluation Services. The instructor's grade and the grade on the departmental examination are not expected to correlate perfectly, since the instructor may evaluate factors in the student's performance that do not enter into the final examination. Each of these two grades makes up one-half of the student's final grade for the course.

higher on both the instructor's tests and the departmental final. It may or may not be significant that this group (composed of those who made the greatest progress during the term as measured here) improved a little on the final, while Group II did not do quite as well as on the weekly tests. The final grades for the two groups are shown in Table II.

TABLE II
BREAKDOWN OF THE FINAL GRADES RECEIVED BY STUDENTS IN GROUPS I AND II

FINAL GRADE	NUMBER OF STUDENTS RECEIVING EACH GRADE	
	Group I	Group II
(1)	(2)	(3)
A	4	1
B	6	1
C	5	8
D	1	5
F	..	1
Total	16	16

TABLE III
L-SCORES MADE BY GROUPS I AND II ON THE ACE

L-SCORE	NUMBER OF STUDENTS RECEIVING EACH SCORE	
	Group I	Group II
(1)	(2)	(3)
Highest 12 per cent	4	2
Highest 16 per cent	2	2
Highest 22 per cent	4*	2
Lowest 22 per cent	2	4*
Lowest 16 per cent	2	3
Lowest 12 per cent	2	3
Total	16	16

*The median.

ALTHOUGH it is not the purpose of this paper to discover why some students improve and some do not, it may be interesting to examine the data on three variables. Because of the small number of cases, these findings should be considered merely suggestive.

Hypothesis 1.—The students in Group I are more intelligent than the students in Group II. In order to check this possibility, the linguistic scores (L-scores) on the American Council on Education Psychological Examination (ACE) were tabulated (see Table III). The evidence does not support the hypothesis: although there is a small difference between the two groups, the whole range of L-scores is found in both groups.

Hypothesis 2.—The students in Group I are more competent readers than those in Group II. This hypothesis was checked by tabulating the total

reading scores for these students on the Michigan State University Reading Test given in the orientation tests on entrance to M.S.U. The distribution was similar to that on the psychological tests, which were also a part of the orientation tests (see Table IV). Again these data do not appear to support the hypothesis, although there is a slight tendency in that direction.

TABLE IV

TEST SCORES MADE BY GROUPS I AND II ON THE MICHIGAN STATE UNIVERSITY READING EXAMINATION

TEST SCORE	NUMBER OF STUDENTS RECEIVING EACH SCORE	
	Group I	Group II
(1)	(2)	(3)
Highest 12 per cent	3	2
Highest 16 per cent	3	..
Highest 22 per cent	4*	3
Lowest 22 per cent	2	5*
Lowest 16 per cent	3	4
Lowest 12 per cent	1	2
Total	16	16

*The median.

Hypothesis 3.—The students in Group I may have been better informed about social science when they started the course than the students in Group II. Data on this point are available from a pre-test given at the beginning of the course. It was explained that the test would furnish some idea of the content of the course and the type of question used. However, the students were assured that the results of this test would in no way affect their grades in the course. It was possible to compare the performance of Groups I and II on 20 questions, 15 true-false and 5 multiple-choice. Without correction for chance, the scores were as follows: for Group I, 9.4 on the pre-test, 14.4 on the regular weekly tests, and 18.8 on the review test; for Group II, 9.5 on the pre-test, 14.5 on the regular weekly tests, and 13.3 on the review test. It will be noted that there was an insignificant difference between the two groups on the pre-test and the regular weekly tests. However, Group I improved on the review test, whereas Group II answered fewer questions correctly. The questions used on the pre-test were carefully selected from previous tests as being the most difficult and calling for the highest degree of discrimination on the part of the student.

The limited evidence indicates that improvement in this group does not appear to be related to intelligence, reading ability, or the amount of information the student possessed when he enrolled in the course. It may be that the best measure of improvement is the congeniality of the reciprocal relationship between the student and the teacher, or motivation, or some other factor or combination of factors of significance in learning.

WHAT we have shown here is that there is an identifiable factor in a student's work which can be called the progress or improvement factor, and that progress can be measured objectively. An objective method has been presented—one which, incidentally, can be used with essay tests as well as objective tests, for selected essay questions can be repeated too. Thus, by using any distribution desired, the students in any course can be arranged in a continuum and assigned grades. If a progress grade were computed for the 80 students on a 10–20–50–15–5 basis (10 per cent assigned *A*, 20 per cent *B*, and so on), the divisions would be as shown in Table V.

TABLE V

A Possible Distribution of Grades Based on the Progress Made by Eighty Students

Number of Students	Grade	Per Cent of Progress
(1)	(2)	(3)
8	*A*	85 (and above)
16	*B*	62 to 84
40	*C*	20 to 61
12	*D*	−18 to 19
4	*F*	−19 (and below)

The purpose which a progress score serves depends on the grading system that an instructor, a department, or an institution uses. We are not suggesting that the amount of progress in a course should be the sole basis for the grade or that it should be used in place of any existing factor now graded, but merely that it be added to the other factors involved and included in the final grade. Neither have we indicated how much weight should be given to the factor of progress. Perhaps about 10 per cent might be a starting point until we gain more experience on the evaluation of this factor in measuring achievement.

Where Will the Money Come from?

Financing the Expansion of Higher Education

By M. M. Chambers

BY 1970, college and university enrollments will be doubled, and the cost of operating the institutions is likely to be tripled. Operating costs will increase from roughly $4 billion a year at present to $10 billion or more in 1970. Where will the additional $6 billion a year come from?

State governments are now appropriating over $1.25 billion a year for higher education, almost all of it for state-supported institutions. The federal government's contribution to operating funds, except through contracts and grants for organized research, is as yet comparatively small. In 1959, it amounted to about $500 million.

Students are paying about $1 billion. Most of this goes to private institutions, in which, on the average, student fees supply 55 to 60 per cent of the operating costs; in public institutions, they amount to an average of about 20 per cent. Private gifts are being received at a rate of about $1 billion a year. Income from invested funds and miscellaneous other sources provides smaller amounts.

Thus the three major suppliers at the present time are the state governments, students who pay fees, and private benefactors. Frankly, among the other smaller sources, only one—the federal government—seems capable of making a substantially larger contribution than at present. Private gifts are increasing at a moderate rate. They come from alumni, church organizations, business corporations, philanthropic foundations, citizens of surrounding communities, and other friends of the institutions. They are encouraged by federal and state tax laws, and will continue to increase.

Many private institutions are raising student fees, but the public universities and colleges are reluctant to do so, remembering that they were intended in practically every instance to be free of tuition charges and, in contrast to the aristocratic tradition, open to able sons and daughters of working people.

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If student fees continue at the level they are now, by 1970 the doubling of enrollments will produce an additional $1 billion a year. Private gifts will probably yield another $1 billion annually within a decade. We face a momentous decision. Shall the additional $4 billion come from tax funds, or shall this burden be shifted to the students and their families? Shall education be a public service, or a commodity for those able to pay for it?

A century ago we decided once and for all that public education is an essential public function, and that schools and colleges will be maintained at public expense. Do we want to revive the ancient argument about the alleged injustice of compelling the bachelor to pay taxes to support the schools for his neighbor's twelve children? More than a century and a half ago, both the federal government and the states began to endow public schools and universities with public lands. Is this splendid policy now to be abandoned? Certainly we should make no such reversal when the development of all available talents in the public interest seems more imperative than ever before.

Traditionally we allow private colleges and universities to manage their own affairs—academic as well as fiscal. If they think it necessary to raise their fees, they can do so and continue to fulfill a useful purpose by educating those able to pay. But if their fees approach or reach a level sufficient to pay the full costs of operation, they break faith with the generations of private donors who have contributed to their endowment funds in order to provide education at less than cost. It is true that a few of the great private universities can be highly selective, if they choose, on a basis of financial ability as well as intellectual capacity in their choice of students. But even they can price themselves out of the market. Perhaps that is why some of their representatives appear so desperate in their efforts to induce other private colleges, as well as state institutions, to raise student fees inordinately. The fact is that 60 per cent of all college and university students are now in public institutions; by 1970, probably 80 per cent will be there. This shifting of the balance will be no calamity. From any standpoint, it will be preferable to having large numbers of able students denied the opportunity to attend college because they cannot afford to pay excessive fees.

Some say that a system of scholarships can solve all of our problems. Actually, a majority of all scholarships available are worth less than the cost of tuition, and it is not uncommon for an assistantship to pay $500 for $1,000 worth of work. Adequate scholarships would involve the vast sums that can come in these days only from the national government. To administer such a scheme, a vast bureaucracy, even if decentralized, would be inevitable; and it would bring with it invasions of privacy which no one wants. It is much simpler to keep the campus gates open to all able students by keeping the public colleges and universities tuition-free or available at a merely nominal cost. This is the only way to make sure that all able students will have their chance and that all available talent will be developed.

From some quarters it is urged that student fees should be doubled in public institutions and raised to cover nearly full costs in private institutions so that perhaps an additional $3 billion a year would be taken from students by 1970. Coupled with this is the preposterous proposal of a scheme of long-term private borrowing in which families would pay for education as they now pay for ranch-type housing and hard goods. Those who advocate long-term loans to pay for higher education ignore the fact that few students are willing to mortgage their future; that no girl wants to saddle a prospective husband with a long-term debt; that this scheme discriminates grossly against women when more than ever we need educated woman power; that all state universities and colleges were originally intended to be the capstones of *free* public school systems.

It is often loosely stated that a college graduate stands to gain $100,000 or more in lifetime earnings because of his college attendance. Obviously this is not true of all graduates, especially of women; and even if it were true, how can it justify requiring the student to pay for his education at a time when he is young, untrained, and unable to do so? If he later earns an additional $100,000, he will pay more than the cost of his education in income taxes on that extra income. Moreover, in later life, he is quite likely to make gifts to his own college or to other schools. All this he can do with less hardship than high tuition fees would have caused in his youth.

Besides squeezing out many capable students who cannot pay, and thus losing to the nation the opportunity of developing their talents, the shortsighted high-fee policy produces other deplorable consequences. By falling more harshly upon women than on men, it helps to cut off the supply of sorely needed educated persons in such professions as nursing, teaching, and social work. Worst of all is its unquestioned tendency to cause many students to focus their ambitions on high-paying jobs so that they can get out of college and make a "fast buck" and pay off their college debts. This motivation is not conducive to the best use of the college years, and hardly creates an atmosphere favorable to an impartial search for truth. The worst damage that a high-fee policy can do to a college or university is to degrade its students' aims and encourage mercenary motives.

FORTUNATELY, a high-fee policy for public universities will not be necessary. The $4 billion a year which will be needed by 1970 can be supplied from governmental sources. The whole could come from the federal government if as little as 5 per cent of current federal budgets were allocated to the states for this purpose.

Four billion dollars now represents about 1 per cent of the gross national product. If, by 1970, the gross national product rises to $600 billion, as most economists think it will, then an expenditure of $10 billion a year for higher education would be about 1.7 per cent. If the increase frightens anyone, he need only observe that the Soviet Union is now said

to be expending about 3 per cent of its gross national product annually for higher education.

It is not likely that the United States will continue indefinitely to spend tens of billions a year for the maintenance of hundreds of military bases in all parts of the world. In fact, the development of new weapons has already practically destroyed the usefulness of many of these bases. But the annual expenditure of $40 billion by the federal government for defense is a powerful stimulus to business. Will a reduction cause an economic collapse? Certainly not, if we redeploy a part of the funds thus released to the support of higher education in this country. And this investment will yield future as well as immediate gains.

To preserve the freedom and diversity of American higher education, we need to let each state control its own system. If this is to be done, we must stop making federal appropriations only for narrowly specified educational purposes such as agricultural extension, vocational training, medical education, and so on, and begin giving grants without special conditions to the states for the broad purpose of developing their own systems of higher education.

The states can more than double their support of higher education by 1970. Reports received from forty-five states show that in 1959 nearly $1.25 billion was appropriated for the operating expenses of higher education, which was an increase of about 20 per cent over comparable appropriations in 1957.[1] If this rate of increase is merely maintained for a decade, the fifty states will be appropriating about $3 billion by the fifth biennium.

Superficially, one may get an impression that some states are nearly insolvent. This is an erroneous notion. Although state revenues and expenditures have increased greatly in the last fifty years, it is not at all difficult to observe that the modernization of state tax systems has taken place rather slowly. Of course there are wide differences in the resources of the states; but we have a solid core of populous industralized states, with enormous, rapidly increasing wealth, whose state taxes per capita are comparatively low.

Significantly, forty-five years ago the states were devoting an average of 10 per cent of their total annual expenditures to the support of higher education; this year, on the average, they are spending only 4 to 6 per cent of the total for higher education. Obviously, we do not esteem higher education as highly as we did. Here again, there is wide variation among the states, partly because some states rely heavily upon private colleges and universities, whereas some have no institutions of this type. Nevertheless, the states are spending comparatively less for higher education than they did in 1915.

Tremendous increases have occurred especially for highways and welfare activities, stimulated by federal matching grants. This has

[1]These figures were first reported on pages 71 and 72 of the October, 1959, issue of "Grapevine," a mimeographed newsletter privately circulated by the author.

resulted in some distortion of the appropriate balance among state expenditures, now overdue to be redressed. However, many states made progress in 1959 toward modernizing their revenue systems.

The idea of lowering state taxes to get new industries into a state is rapidly being supplanted by the realization that enlightened corporate management is attracted by good public-school systems and especially by the research facilities and research leadership found in well-supported state universities. Competition among the states to provide the best of these facilities is much more in the public interest than the older race to cut down essential public services in order to offer outsiders the inducement of low taxes or no taxes.

THE history of 1959 shows that the states are aware of their responsibility for higher education and are meeting it increasingly well. Seven of the forty-five states replying to queries report a two-year increase of 33 per cent or more in their appropriations. These are Alabama, Alaska, Arizona, Hawaii, Nevada, New Mexico, and Rhode Island. Only three states—Arkansas, South Carolina, and South Dakota—show an increase of less than 10 per cent. Increases of 17 to 25 per cent were made by many of the more populous states which have the greatest influence on the national picture. Among these are California, Illinois, Indiana, Iowa, Louisiana, Michigan, Missouri, New Jersey, New York, North Carolina, Ohio, and Oklahoma.

To note increases in appropriations of state tax funds does not, of course, afford a comprehensive picture of the financing of higher education. Several of the larger state universities are currently deriving over half of their annual operating expenses from sources other than state appropriations—from student fees, private benefactions, contract payments and grants for research from the federal government, and grants from private industries and philanthropic foundations.

But certainly we need to know where we are going in the area of state appropriations, and how fast we are moving. A two-year or a four-year period is, of course, too short a time to provide a basis on which to make sweeping conclusions. For example, some of the states making small increases for the current fiscal period may have made very large increases four years ago or six years ago. These matters can be ascertained by anyone who wishes to examine the biennial reports of the U. S. Office of Education on higher educational finances. However, these reports are not generally available until a couple of years after the particular biennium has elapsed. I was able to report the state appropriations of 1959 before the year ended only because of the kindness of my correspondents in the state capitals.[2]

The extremely wide range of percentages of biennial increases in appropriations is from 1.5 per cent to more than 100 per cent. Neither

[2]M. M. Chambers, "State Appropriations for Higher Education, 1959," *College and University Business*, XXVII (November, 1959), pp. 81–83.

of the extreme rates will be maintained indefinitely; but the width of the range suggests some interesting possibilities. Continuation of these observations over a period of several bienniums will be a fascinating study.

CLEARLY, it is possible, short of some unforeseen economic disaster, for the fifty states to make rapid progress toward greater support of higher education. Some states will be able to do much better than others. Fortunately, many of the abler states are among the largest and most populous. In planning for rapidly expanded financing of higher education, we must not sell the states short. They are now furnishing more support than any other major source, and their contribution is increasing rapidly. Additional support from the federal government will not mean any slackening of state support.

Currently, the bulk of federal support is in the form of large-scale financing of research undertakings, to which the states have not yet contributed in much volume or with much enthusiasm. In the future, if federal support assumes a more generalized form, as we hope it eventually will, it can easily be predicated upon full maintenance or a reasonable increase of the state's contribution. If by 1970 the state appropriations are two and a half times what they are now, and the federal support amounts to four times what it is today, we shall be able to lift the burden of fees from students in public colleges and universities and forget the nightmare of a vast bureaucratic system of scholarships which would take money out of one pocket and put it into another. An uncompromising "meritocracy" could really be a horror! Stepping up the tax support of tuition-free higher education is the simple, practicable, equitable way of keeping opportunity open and of making the most of America's intellectual resources.

What the Colleges Want from the High Schools

Well-rounded Individuals or Well-grounded Students?

By Andrew L. Pincus

WHAT kind of high-school graduate are college admissions officers really looking for in this era of the sputnik race? Do they want the widely praised "well-rounded individual" who has earned a sports letter or two, been active in clubs, written for the school newspaper, played a role for the Thespians, served as a class or fraternity officer (or, better yet, as both), and barely achieved a low *B*? Or do they want the serious-minded student who can write a clear, thoughtful theme on Macbeth or Sarajevo, has studied a modern foreign language for at least three years and possibly also learned Latin, has shown leadership in one or two extra-curricular activities—preferably ones related to his studies—and gives promise of wanting to graduate from college with more than a "gentleman's *C*"?

An unusual survey of sixty-two leading American colleges and universities, which suggests that the latter profile describes the ideal Freshman admissions directors seek, was completed in 1958 by Ruth and Harald Kenseth for use in planning a high school for Chatham Township, New Jersey, to open in 1962. Chatham Township is a rapidly growing suburban community of approximately 5,600 residents, located about fifteen miles west of Newark. The heads of families are business executives and professional men, including a high proportion of scientists and engineers, many of whom work at nearby installations of Bell Telephone Laboratories. Most of the teen-agers attend the high school in neighboring Chatham Borough; but because the township's population has more than doubled in the last ten years, a township high school has become economically desirable. To get the preliminary planning started, the Board of Education commissioned a citizens' committee to study such problems as legal requirements, community desires, and curriculums. The Kenseths were appointed as a subcommittee to find out what kind of preparation the colleges want their Freshmen to have. They were given this assignment because of the familiarity with educational circles Mr. Kenseth has gained as vice-president of a fund-raising organization which serves many colleges.

When they learned that a survey conducted at Chatham High School had shown that 95 per cent of the parents in the township hoped to send

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their children to college, the Kenseths decided not to follow the obvious course and restrict their investigation to such nearby universities as Princeton, Rutgers, Drew, and Fairleigh Dickinson. Instead, they also went to all the Ivy League schools, other private liberal-arts colleges, a variety of public and private universities, the major technological institutes and military academies, and a sampling of church-affiliated schools and teachers' colleges.

In all, the Kenseths sent out one hundred letters of inquiry. The response exceeded their expectations. Seventy-eight replies were received, and while sixteen of these were merely acknowledgments or vague generalizations, the other sixty-two were thoughtful, specific statements of wants and warnings.[1] All were prepared by presidents, deans, admissions directors, or other administrative officers; several—such as those from Brown, Johns Hopkins, Muhlenberg, and St. John's—contained the combined views of two or more administrators. The replies expressed almost unanimous admiration for the purpose and method of the Kenseths' inquiry. In a typical compliment, Elizabeth Geen, dean of Goucher College, wrote, "If your letter is any indication of the kind of planning and thinking that communities are doing today in view of the need for increased educational facilities, then I think that education in the future will be better than it is today."

ALTHOUGH the Kenseths asked six broad questions, only three bore directly on the high-school academic program:

1. What modifications in the standard college-preparatory curriculum would be desirable from your point of view?
2. Which subjects should be emphasized to meet your present or projected entrance requirements?
3. What should be the role of athletics and other extra-curricular activities in preparing students for college?[2]

[1]The following are the sixty-two universities and colleges that furnished the replies on which this article is based:

Public universities—Delaware and Pennsylvania State

Private universities—Brandeis, Brown, Bucknell, Drew, Fairleigh Dickinson, Harvard, Johns Hopkins, Miami (Florida), Northwestern, Princeton, Seton Hall, Stanford, Syracuse, Villanova, Wake Forest, Western Reserve, and Yale

Coeducational liberal-arts colleges—Antioch, Bard, Dickinson, Earlham, Gettysburg, Lebanon Valley, Middlebury, Oberlin, St. John's, Swarthmore, Upsala, Ursinus, and Wilkes

Men's liberal-arts colleges—Amherst, Dartmouth, Hamilton, Haverford, Muhlenberg, (now coeducational), Washington and Jefferson, and Williams

Women's liberal-arts colleges—Barnard, Beaver, Bennington, Cedar Crest, Connecticut, Douglass, Goucher, Hood, Mt. Holyoke, Pembroke, Sarah Lawrence, Skidmore, Smith, Vassar, and Wellesley

Teachers' college—Newark State (New Jersey)

Technological institutes—Carnegie, Case, and Massachusetts

Military academies—The Citadel, United States Military Academy, and United States Naval Academy

Business college—Rider

[2]The general conclusions to be drawn from the replies to the other questions on the Kenseths' survey are the following: (1) A well-stocked and well-used library is vital to the high school. (2) An effective guidance program is valuable in placing students in college. (3) Teachers with liberal-arts degrees are preferred to those with teacher's college training, but it is desirable to have staff members from both types of institutions. (4) A new high school is not necessarily at a disadvantage in placing students in college: the applicant's personal background and the scores he receives on entrance examinations are the most important factors in gaining admission.

Because the questions were phrased to evoke personal comments going beyond the cut-and-dried listings of courses in college catalogues, the answers do not lend themselves to statistical interpretation. Since letter after letter stressed the same points, however, a clear picture of what knowledge and abilities the Freshman should have emerged from the study. Despite varying secondary factors, virtually all the colleges made these basic recommendations:

1. Re-enforcement of the traditional college-preparatory curriculum—English, mathematics, foreign languages, history, and science—should be favored over experimentation with "life adjustment" or "practical" courses—such as creative writing, business mathematics, and home economics—or nebulous survey courses of the "world problems" variety.
2. The English program should give the student the solid grounding in reading and writing that is the essential foundation for all college work.
3. The courses in mathematics should stress the basic concepts of the discipline itself and provide a basis for college work in science.
4. The graduate should have a good working knowledge of at least one foreign language, preferably Latin, French, or German.
5. The high school should place less emphasis on building winning athletic teams and big extra-curricular activities programs, and more on physical fitness for all, good study habits, and individual excellence in one or two wisely chosen activities.

A. Whitney Griswold, president of Yale, sounded the keynote in urging high-school planners "to put every emphasis upon a strong curriculum of solid liberal-arts subjects and to make sure that each student is challenged intellectually to the utmost of his abilities." This theme recurred in other responses according to the differing needs and programs of each school. Gilmore Stott, associate dean at Swarthmore, said that from the point of view of the private liberal-arts college, a high-school program requiring four years each of English and mathematics and three or four years each of history and a foreign language "is still to our mind the strongest preparation" for college. Mr. Stott also commented on the tendency of high schools to increase their offerings "in natural science, in social studies, and other subjects which it is believed will help adjust a student to his social setting, and in practical subjects such as typewriting, shorthand, driver-training, shop, and so on." He added, "It seems to us that schools are perhaps well-advised to be somewhat conservative when it comes to liberalization of curriculums along these lines."

W. E. Nudd, admissions director at Case, spoke for the technological institutes in advising that

> every student . . . will profit most by taking all the mathematics, science, English, history, and language courses that he can schedule, and leaving the vocational type of work alone . . . . It is very difficult and oftentimes impossible to pick up the former type of course work in later years, whereas, on the job, in a comparatively short time, he can learn more than he might ever be able to in school.

Although teachers' colleges are generally supposed to champion a "soft" curriculum, Alton D. O'Brien, dean of the Newark State College in New Jersey, was in accord with other critics:

> The subjects [to be emphasized] should very definitely include concentrated efforts in all forms of communication, oral and written. They should also include a good background in the humanities and more than a passing knowledge in the fields of mathematics and science. The above would all be true no matter what the major a student intended to select in the high-school work.[3]

When modifications in the traditional curriculum were suggested, the changes were, with a few exceptions,[4] in the direction of enrichment rather than acceleration or broad revisions. William F. Logan, director of admissions at Johns Hopkins, wrote as follows:

> The enriched program would bring together students of superior abilities and enable them to cover more subject-matter than would be possible in an average class. This setup is preferable to an accelerated program because it does not project a student out of his age group. At the same time, it does provide superior background for effective college work.

Another frequent recommendation was that the method of presentation used in mathematics be modernized, along the lines under study by the mathematics commission of the College Entrance Examination Board, so as to stress basic concepts and principles of deductive reasoning. It was generally suggested that general and business mathematics be avoided and that preference be given to algebra, geometry, and trigonometry. The technological institutes were the most emphatic on this point.

It is noteworthy that although all the letters were written in the shadow of the sputnik race, there was little demand for more science instruction in the high schools. On the contrary, the tendency was to urge that more emphasis be placed on mathematics than on science. The technological institutes were most outspoken on this point. Their reasoning is made clear by William M. Schutte, assistant to the president at Carnegie:

> The most important single part of a student's preparation for a [college] curriculum in physics is a sound grounding in mathematics. He should have as much algebra, geometry, and trigonometry as it is possible for him to obtain at the high school.
>
> The high-school physics course should stress fundamental laws and their application . . . .

[3]It should be noted that although others were queried, Newark State was the only teachers' college that contributed a usable reply.

[4]The major exceptions were those suggested by J. R. Rackley, dean of the College of Education at Pennsylvania State University, and Harold A. Ferguson, admissions director at Upsala College. Dean Rackley recommended "the reorganization of the many valuable academic and cultural disciplines into broad fields of learning which encourage the learner to focus on basic principles, generalized conceptions, and the methods through which truth may be found and knowledge advanced."

Mathematics, then, is regarded as the "language of science," fundamental to an understanding of scientific laws. For that reason, a majority of the colleges recommended at least three years of high-school mathematics. A substantial minority made the corollary complaint that most Freshmen are inadequately prepared in this field.

It is also noteworthy that after urging "the full program of mathematics" and "some introduction to laboratory science," B. Alden Thresher, admissions director at Massachusetts Institute of Technology, added: "However, we are very anxious that our students have a broad educational background with particular stress on English and on expression."

In stressing the importance of English, MIT only reiterated what 95 per cent of the letters said: The student who goes to college unskilled in the use of his native tongue is at a serious disadvantage in all of his work. About half the letters added that this student, though regarded dubiously by admissions offices, is a campus fixture today. Brandeis, The Citadel, Dartmouth, and Muhlenberg were among those making this complaint.

The plea for better preparation in English was mainly concerned with improving the writing of high-school students. Because college work involves term papers, critical essays, and written examinations, the student who cannot write clear and grammatically correct prose cannot reasonably expect to do well, even if there are indications that he is a genius in non-literary areas like science. This opinion was well put by Sidney B. Bennett, secretary of admissions at Hamilton College:

> May I strongly urge that you emphasize the teaching of English in your system. The one cry among even the best colleges is that too many students are unable to write . . . . One of the reasons for this is that the English departments in schools are so understaffed that the teachers have little time to correct the written work of their students. Many principals are aware of this, but either they don't have the money for additional English teachers or they don't want to discriminate as far as teaching loads are concerned. I can assure you, however, that the school which does a good job of teaching its students how to write clearly and grammatically is going to have a distinct edge when it comes to placing students in college.

A substantial minority of the respondents also complained that their Freshmen can neither understand what they read nor think critically. John A. Perkins, president of the University of Delaware, wrote, "Many college Freshmen fail not because they lack intelligence or motivation but because they are reading at the ninth- or tenth-grade level."

Next in order to English and mathematics, foreign language was the subject which the universities emphasized most. About half the respondents specifically recommended at least three years' study of one language, especially as an alternative to a smattering of two or more. The majority rated French and German the most useful modern tongues,

but many also stressed the value of Latin for developing "a language sense." St. John's actually termed Latin the most valuable of languages for this reason. Despite the international situation, only one school, the United States Military Academy, mentioned Russian as a desirable language for study in high school.

In discussing the place of the social sciences, the schools showed a marked preference for history, especially as a means of understanding the modern world. Several were critical of the citizenship, civics, and "world problems" courses that are offered as social sciences in some high schools. Meribeth E. Cameron, dean of Mt. Holyoke, wrote, for example:

> Except for a brief course in American history, many of our students have not had any serious consideration of the development of our civilization on an historical basis. Instead they have had courses in world problems, or something of that sort, which are ephemeral and are not, in our opinion, a real substitute for an honest-to-goodness historical study.

Jeremiah S. Finch, dean of Princeton, added the warning that because of the emphasis placed on American history, "too little attention is being given to European history." From Jane Sehmann, admissions director at Smith, came the further warning that teachers of high-school courses in such "secondary" social sciences as economics, psychology, and sociology should be more careful to "deal with their material in as concrete and specific a way as they can in order to be certain that their students have a solid basis for dealing with abstract ideas."

The letters also made it clear that nearly all admissions directors are taking a critical second look at the so-called well-rounded individual who was lionized on many campuses not long ago. Alton Sawin, Jr., admissions director at Drew University, said pointedly that "all colleges today are looking for the well-rounded individual, but he must first be a good student."

A large majority of the respondents urged subordination of interscholastic athletics to a physical-education program stressing physical fitness for all. Dean William C. Archie, of Wake Forest, expressed a belief, which was shared by many others, that overemphasis on championship teams has tended to warp values and lower standards at many high schools.

Generally, the letters suggested that extra-curricular activities be encouraged not as ends in themselves but as a means of helping the student to develop his interests and character. The prevailing view was that, ideally, each student should participate in one or two activities only, preferably ones related to his studies, such as journalism or dramatics. The Mt. Holyoke letter expressed this view perhaps more pungently, but no less pointedly, than the rest:

> Certainly, if an applicant for admission has not participated in extra-curricular activities in high school, we may be led to wonder whether she is suffering from some . . . malady which needs attention. On the other hand, our enthusiasm for applicants does not increase in

> direct proportion to the number of extra-curricular activities in which they are engaged. In fact, our Board of Admissions is at times more dismayed than pleased by the prospect of a whole generation of high-school graduates, all of whom have been "leaders" in high school, all rushing frantically from one club or program to another.

THE Kenseths' over-all findings[5] complement those of James B. Conant,[6] president emeritus of Harvard, in his recent study of the American high school. Although he found that fifty-five representative schools were capable of giving a good education, he criticized most of them for not doing enough to encourage the talented student to rise above mediocrity in the range and quality of his studies. The findings of the survey conducted by the Kenseths indicate that the colleges are essentially in accord with Mr. Conant's conclusion. It is significant, too, that both Mr. Conant and the Kenseths' respondents urged higher standards and more concentration on the basic studies as the most effective way to provide a stimulus for the gifted student.

Traditionally, many secondary-school administrators have taken refuge from the demands for excellence in the argument that the community neither wants nor needs it. In addition to pointing to the old bugbear of inadequate budgets, they cite the fact that most high-school graduates never go to college and that the needs of the majority must be served through vocational courses—such as shop, shorthand, and salesmanship—and by training in "citizenship." This is a persuasive argument, and Mr. Conant recognizes the validity of it. However, some new light is shed on the problem by a corollary study made for the citizens' committee by the Kenseths' neighbors, Ruth and John Hoerter. In a survey of nine major representative businesses and industries in the area, the Hoerters encountered the same demand for academic excellence in English, reading, spelling, mathematics, and science that the Kenseths discovered in their survey. The companies questioned reasoned that a new employee who is well versed in these basic disciplines can be trained to do the specific job for which he has been hired after he has started to work. The company spokesmen who were interviewed placed little value on high-school vocational training—especially on shop courses—because they had found that employees can get this kind of training more quickly and more effectively when they are on the job. They added that business and industry simply do not have the time or will to teach their stenographers how to spell or their laboratory technicians how to solve problems in algebra. The Hoerters' report noted,

> It was the over-all opinion [of the company spokesmen] that the young people did not pay sufficient attention to these subjects [English, mathematics, and science], considering them incidental or just "something to be picked up as you went along."[7]

[5]Chatham Township (New Jersey) Citizens Committee on Educational Planning, "Report of the Educational Standards Committee," May, 1958, pp. 20–42.
[6]*The American High School Today* (New York: McGraw-Hill Book Company, Inc., 1959).
[7]Chatham Township Citizens Committee on Educational Planning, *op. cit.*, p. 44.

In combination, these two studies serve as a warning to high-school students and administrators that modern scientific advances have not made the traditional academic disciplines obsolete. If anything, they seem to be more in demand now than at any time in recent decades. What appears to be needed in the high schools today is more of the basic education that prepares high-school graduates to be good college students and useful citizens.

The Longmont Experiment

College-Level Work for Exceptional High-School Seniors

By Walter D. Weir and Marc Ratner

IN NOVEMBER, 1957, the directors of the honors program in the College of Arts and Sciences of the University of Colorado were asked to help design a special course which would challenge some of the exceptional students in the nearby Longmont High School. The end result of this inquiry was the inauguration in January, 1958, of an experimental honors seminar for twelve selected Longmont Seniors, conducted by the writers, who drove nineteen miles to Longmont each Wednesday night throughout the spring semester to meet with the students in the informal setting of their homes.

The Seniors participating in the experimental class were chosen by the Longmont high-school staff on the basis of grades, test scores, and faculty judgment as to who would best respond to a college-level course. The grades of all twelve were high (half of them were carrying straight-*A* records), but test scores (California S.F.) ranged considerably: two students scored 140, one 136, three in the 120's, four between 115 and 120, and two between 105 and 110. The directors of the University's honors program, J. W. Cohen and Walter Weir, interviewed each of the selected students in an effort to evaluate their intellectual promise and ascertain their interests and academic backgrounds. Preliminary evaluations of the students by the interviewers correlated highly with the evidence furnished later by test scores and grades; the three students rated as having exceptional promise also showed the highest test scores and grades. (Contrary to popular assumption about the gifted, these three students were not lonely, isolated intellectuals but were the acknowledged leaders of the senior class, active in the school governing body, the news-

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paper and yearbook, and athletics.) The interviews revealed that, with one exception, none of the students were widely read; in discussing their reading most of them apologetically mentioned some current fiction and offered names of classics which they intended to read when they "got time." Cohen and Weir concluded that the selected students were working below capacity, although they were far from being anti-intellectual. All of them expressed their eagerness to undertake more serious academic work.

Our primary aim in the experimental class was to test the willingness and ability of superior high-school students to become genuinely engaged with ideas and to handle college-level readings effectively; we were interested also in the response of high-school students to the challenges of give-and-take participation in a conference situation. We selected a group of readings from general literature, the natural sciences, and the social sciences, realizing that it would not be possible in one short semester to provide much filler for the gaps in background revealed by our preliminary interviews, but aiming at least to introduce techniques of analysis which we believed would aid the students in developing a critical approach to a variety of subject-matter. We aimed also at arousing interest in a wide range of material and encouraging future reading in many directions. The reading list was as follows:

J. D. Salinger, *The Catcher in the Rye*
Arthur Miller, *Death of a Salesman*
Alan Paton, *Cry, the Beloved Country*
Bible, Sermon on the Mount
Sophocles, *Oedipus Rex*
William Shakespeare, *King Lear*
Henrik Ibsen, *Hedda Gabler*
George G. Simpson, *The Meaning of Evolution*
James B. Conant, *On Understanding Science*
Selections from *Harvard Case Histories in Experimental Science*
Mark Twain, *Huckleberry Finn*
Charles Dickens, *Bleak House*
Feodor Dostoyevsky, *Crime and Punishment*
André Malraux, *Man's Fate*
Milovan Djilas, *The New Class*
C. Wright Mills, *White Collar*
Samuel T. Coleridge, "Kubla Khan"
Shakespeare, "Sonnet 18"
W. B. Yeats, "Wild Swans"
Frank Lloyd Wright, *A Testament*

WE WERE asking the class to deal with material which we might reasonably hand to our college Juniors, and the problems involved in this demand became apparent in our first session. The lack of sophistication with which our students reacted to Salinger's *The Catcher in the Rye* surprised us, we confess. They found the book "shocking" or "vulgar," and whereas we had hoped they would relate the gropings of Salinger's sensitive young hero, Holden Caulfield, to their own searchings, we were

dismayed to find them dismissing him as a "juvenile delinquent." In part, this reaction was a result of their small-town milieu, but it was also a reflection of their careless reading habits.

A major weakness in the previous training of these students was sharply revealed by the difficulty they experienced in formulating significant questions and by their general inability to approach reading matter critically. "I never realized before that there was more to a novel than plot and characters," one astonished student reported. Most of our students were "plot readers," missing the wider themes, ignoring symbolism and style, and unaware of the significance of setting. In discussing the non-fictional selections, the students were often careless in their statement of the author's thesis, and they rarely bothered to organize the evidence he provided for it.

Lack of factual background was also a formidable obstacle. The students knew almost no history and little about the arts, and their acquaintance with literature was too superficial to be useful. They were very poorly informed in the sciences, although most of them had taken one or two courses in general science, biology, chemistry, or physics. Discussions of the scientific readings necessarily began on a somewhat elementary level. For instance, we had to explain the basic principles of the Darwinian theory before we could hold a group discussion of Simpson's *Meaning of Evolution*; the students had only vague notions of the theory and its implications. A similar situation arose in a discussion of the development of Dalton's atomic-molecular theory.

The inadequate background of the students, coupled with their lack of experience in critical analysis, made it difficult for the instructors to generate productive discussions in which all class members could participate and to help the students integrate the material they covered. We attacked these problems as best we could, providing a series of questions in advance of each colloquium to serve the students as guidelines in their preparation of the next week's assignment. In order to bring all of the group into the discussion, we sometimes asked each member of it to state his or her opinion on a point at issue. The problem of cohesiveness was always with us, and in guiding the discussion we tried to formulate questions which would lead the students themselves to relate the various materials they had read. We sometimes resorted to short lectures when we found the class particularly weak in background or preparation.

Since our class was an "extra," for which there was no release from regular classes, finding time for preparation plagued the students. All of them read the assignments, but time for digesting the material properly was another matter. "You must consider all of the activities we take part in," one of them reminded us. (Some of our students gave us the impression that "activities" took even more time from their colloquium reading than did their studies.) Although the difficulty of some of the assigned reading contributed to the problem of preparation, the students had little complaint in this regard. "Much of the reading *was* difficult,"

one student commented, "but through it I was driven to greater and better comprehension . . . . I think I would have resented it if the assignments had been easier because I have been going through *easy* reading all my life." Another echoed the same point of view: "The reading was naturally more difficult than that to which we have been accustomed, but I would have been disappointed if it had not been."

Even in the short span of eighteen meetings we observed marked changes in the students' perspectives. Foremost among these was a consciousness of their own limitations which in the ordinary course of events would have come in their first year at college. This awareness was revealed in answers to an evaluatory questionnaire which we asked the students to fill out anonymously.

> I used to think I was well-read for my age, but I see now that I have a long way to go!
>
> This program has indicated to me how much I *don't* know about *everything*, which, I suppose, is a start. At any rate, I have such a desire to increase my knowledge that at times I feel smothered in my narrow realm of intelligence and want to grasp at everything all at once.

There was a notable improvement in the students' capacity to read literature at various levels. It was possible for us to gauge their improvement in the drama readings especially; in discussing each successive play they showed surer understanding of characterization, symbolism, and action, and greater ability to grasp the broad intent of the dramatist. They were beginning to explore the relationships of form and content. As the semester went on, we noted that they showed more appreciation of books read earlier in the course: for instance, they frequently referred back to *Catcher in the Rye* with new insight; in an interesting reversal of their first opinions, some of the students now described Holden Caulfield as a "twentieth-century Huck Finn."

We were of the opinion—shared by the students, according to their answers to the questionnaire—that the readings in the humanities had been the most fruitful, those in the sciences the least. In part this was due to the non-controversial nature of the scientific material, but in larger measure it was due to the inability of the students to cope with the scientific materials. One student stated the general view: "The one assignment that was really over my head was *Case Histories in Science.* Although my favorite course last year was chemistry, this selection was too difficult for me." Yet in discussing readings from the natural and social sciences, areas in which the problem of limited background was most acute, the students displayed interest and a desire to learn more. For example, in discussing Conant's treatment of the nature of experimental science, they raised questions which led to a digression on the use of non-Euclidean geometry in astrophysics. Digressions such as this often developed along fairly elementary lines in response to their curiosity about everything from political to physical theories.

Asked to estimate the success of the program, our students agreed that both the materials used and the discussion method of teaching had evoked a quest for learning. All of the students professed to find the seminar method congenial to learning, and without exception they preferred it to the usual classroom techniques. Some stressed the value of its informality; others cited the "neutrality" of the discussion leaders as a challenge to the group to present its own opinions. In the words of one student, the discussion group "has taught me to apply and proportion myself. It has also broadened my scope of knowledge and awakened in me more than one way of looking at things and people. By informal discussion, I have learned more easily than through straight, old-fashioned lectures." Another student commented that the program

> has been among the most valuable experiences I have encountered. Its purpose was to broaden—and that it did—not so much in knowledge as in ideas. The discussions have revealed new insights and fresh concepts in thought which stimulated my own interests immensely. I now have a strong curiosity about so many things and a desire to search deeper. . . . I have gained much of this through the program.

Another student wrote that he had "never had the slightest idea of the vast store of knowledge available in this variety of books concerning analysis of characters, historical information, and application to our everyday life . . . ." This same student summed up his experience as follows: "This has been my greatest lesson: learning what to look for, to *think*!" As our experimental program came to an end, one thing was abundantly clear: student enthusiasm for the exploration of ideas was at a high pitch. Unwilling to let the course terminate with graduation, the students decided to continue on their own with readings and weekly colloquia throughout the summer.

In response to our question whether they thought the program should be continued at Longmont High School, the students replied with a unanimous affirmative. "I believe," wrote one, "that *every* high school, not just Longmont High, should have a program of this sort . . . . A person with simply a high-school background—although he *thinks* he knows just about everything—has only a thin skeleton of knowledge. This program would supplement it." "Every high school needs a program similar to this to challenge the unchallenged," said another.

THE positive results of the Longmont experiment may be summarized as follows: (1) it convinced us that bright high-school students want and, given time, can handle, a demanding and comprehensive course of study; (2) it made the students themselves aware of their limited intellectual experience and convinced them of the need for establishing high-school honors courses for superior students in the basic disciplines of science, history, social studies, and literature; (3) it suggested that the role of extra-curricular activities in the high school needs a thorough re-examination; (4) it indicated that more use of conference techniques

of teaching might help awaken the intellectual curiosity of the talented; (5) finally, it suggested that independent reading courses may be a productive teaching technique with highly motivated high-school students. As one of our Seniors said, "I know that I would benefit more if I were allowed to go on my own and come together with my teachers to clear up points I was uncertain about."

It is our opinion that the type of conference course described would ideally be given by a member of the high-school staff working together with a university staff member whenever location made this arrangement possible. The prestige of working with college professors seemed to be a significant factor in the motivation of our Longmont students; some expressed the opinion that the course would have had less value if it had been handled by their high-school teachers. However this may be, it is likely that the college teacher will have had more experience in seminar techniques. Beyond this, both teachers and, ultimately, their schools would benefit from the exchange of ideas and the exploration of common professional problems. The participating professor, in a position to make his university's standards clear to receptive high-school students, might even help to still the cry of "freshman illiteracy" which rises from the faculty clubs of the land each fall.

Short Contributions

My Museum of Morbid English

A college registrar, chuckling heartily, pulled out a letter he had received from a prospective student, handed it to me, and triumphantly said, "Read that." Well, I had to admit that the letter wasn't very good, for it began with the salutation "Dear Sir or Madame?" and went on to misspell *college* repeatedly as *collage*. But the registrar's naïve belief that a teacher of freshman composition courses in college could be shocked by written blunders amused me greatly. One might as well try to startle a medical pathologist by showing him a corpse. That registrar ought to step inside my Museum of Morbid English and examine the diseased specimens I've accumulated in a decade of reading freshman compositions.

If your nerves aren't jumpy, let's enter my Museum and begin the tour by inspecting the showcase labeled "Confused Words." If you start alphabetically, you will come across this ambiguous specimen contributed by an exuberant eighteen-year-old boy: "Once I had a date and had to brake it." His offering is matched by that of a teen-age girl who argued that "capital punishment should not be used in the training of little children." If she tripped up on *capital* and *corporal*, another student stumbled over *forward* and *foreword*, earnestly requesting on a post card, "Please foreword my grades . . . ." This last student must have been close kin to the girl who, in her search for a synonym for *genteel*, put down "well bread"!

A teacher of French gleefully told me of a student who declared he was taking "a partition to the dean." I find the *partition-petition* mix-up rather old hat, though I do keep a specimen in the Museum of Morbid English: "One time someone told him that he should run for county sheriff, and he started a partition." I much prefer reading about the students who climbed a petition: "It started out all right until the boys began sneaking into the room next to the library, which was set off by a petition about eight feet tall . . . ." Among word confusions, *angle* for *angel* is too common to receive much notice—"The parents then came to visit school and found their angles could be brats"—but I did experience a thrill when I discovered a reference to the "archangle Uriel."

Though it carries the standard items, the Museum naturally takes greater pride in the more spectacular pathologies. Its "Many average

American fathers shutter at the thought" matches nicely with the ape in Poe's detective story, which "swung by the shudder through the window into the room." Nor can every museum boast of a *scholastic-socialistic* confusion. In a data sheet accompanying his letter of application, a student had a division entitled "Socialistic and Athletic Honors." I doubt if he could get a job these days!

Occupying a showcase next to "Confused Words" in the Museum of Morbid English is a large collection called "Typewriter Betrayals." Now and then I am uncertain where to place a given specimen, though I think that the "disk-sized and unabridged dictionaries" should be classified under "Typewriter Betrayals." I am fairly confident that "In the campaign of 1860 the Democratic Party was spit into two parties . . ." should also be exhibited there, as well as the phrase referring to "a famous navel captain" and the admonition "Go and stand in a coroner." On the other hand, it may be that the following word wreck from a freshman theme should be placed under "Word Confusions." The student wrote of "carvings of the three profits and the three kings of Judah."

Always popular in the "Typewriter Betrayal" division is the sex section. *Six* often comes out *sex* on the typewriter, as it did in this official notification: "This report for the first sex weeks of the Spring Quarter, 1957, is due in the Registrar's Office by noon on April 23." According to a student, "There were sex cruisers in the Battle of Savo Island," though I do not recall any mention of this occurrence by naval historians. One can't be too harsh on "Typewriter Betrayals" of students, however, for I remember eating for many months in a restaurant which featured on its menu a strange dish called "candid yams."

Just behind the "Typewriter Betrayals" in the Museum of Morbid English is the "Department of Mutilated Dates and Altered Statistics," a thriving subdivision of the institution. Here are deposited the remnants of figures and statistics that have been maimed by college Freshmen. A sawed-off date is contributed by the student who wrote, "I came to the University on Sept. 6, 195." Whether this early arrival was A.D. or B.C. is not stated. A century or two one way or another really doesn't matter: "They [Abraham Lincoln and Mary Todd] are married on November 4, 1942." If a century is added in the preceding paper, a century is subtracted in another in which the date of the Russian Revolution is given as 1817. As with dates, so with statistics. If this student is correct, Napoleon may have lost to the Russians because he didn't bring along enough men: "Napoleon's army was made up of nearly eleven hundred soldiers."

Occasionally I have heard Shakespeare's fondness for using nouns as verbs spoken of as though it was a thing of the past. Shakespeare used *duke* as a verb in "Lord Angelo dukes it well," but today's college Freshmen can make noun-to-verb changes just as freely. Some of their experiments may be found in the Museum under the sign "Strained Parts

of Speech." *Editor* has changed from noun to verb in this specimen: "The Britannica is now editored by Walter Yust . . . ." The noun *satire* has slipped across the line in "Hawthorne in his story 'Earth Holocaust' satires Emerson's idea of books." And *defect* switches from a noun to a verb in this specimen: "Privilege to print any material greatly defected the magazine."

No, word-creation is every bit as alive in modern freshman English as it ever was in Elizabethan English. It just isn't appreciated as much. One student has coined *writenly* to go with *orally* in the phrase "orally and writenly." Another grew tired of using plain old commonplace *omission* and substituted for it the not ineffective *omittance*. A cheerful blend of *illiteracy* and *alliteration* has been attained in the sentence "Illiteration is also used in both poems." Noteworthy as the preceding coinages may be, they are far exceeded by the inventiveness that has almost created a new language in the sentence "The upper classmen had propagandered the freshmen muchly."

Even a brief tour of the Museum of Morbid English should include a short halt at the "Verb-Virus" display, where strange and fascinating tense infections are on exhibit. A few specimens of verb disease gathered from underclassmen's prose will catch the eye of even the hurried observer: ". . . but Thoreau only teached for the money which was very little"; "I believe that Melville based the book on this voyage as he seened it after ten years"; and finally, "He was borned in Florida, Mo."

As the visitor passes the spelling cases in the Museum, he will notice one labeled "Drastic Spelling Reform." Here the Freshmen have seized upon the silent letters of the English orthography and thrown them out, spelling *ptomaine* as *tomaine*, *knack* as *nack*, and *knotty pine* as *notty pine*. In the same showcase is a subdivision that I call the "Alabama Collection," the items of which I found in student papers in that state. In these specimens the disdain of the Deep South for *r* in pronunciation has shifted to spelling. These spellings with a Southern accent include *Thusday* for *Thursday*, *coner* for *corner*, *oders* for *orders*, *quaters* for *quarters*, and *futher* for *further*. My particular prize, however, is the spelling of the unreconstructed Alabamian who reminisced of "gramma school days."

Near the exit of the Museum of Morbid English is a display called "Surplus Words." From the comparatively simple redundancy of a "1954 Ford convertible yellow in color," employed in place of the briefer and better "yellow 1954 Ford convertible," the freshman fondness for using the unnecessary word rises to greater heights in the sentence "We realized she has married into poor poverty." Among the items in which the Museum takes particular pride, however, are the unusual sideburns described in the following sentence: "For instance, when Elvis Presley first became popular, most of the boys had long haircuts with sideburns down the sides of their faces."

Frequently the visitor in a modern museum can press a button and get rich sound effects—perhaps a lecture or a train whistle or a song—to

go with the visual display. The Museum of Morbid English also maintains a sound-effects accompaniment in certain exhibits, especially in the "Stuck Needle" record collection. In the sentences preserved on these disks, the needle strikes a crack and thus causes the same word to be repeated relentlessly. A mild example occurs in the repetition of the word *kind* in this sentence from a Freshman's theme: "His wife was the kind and understanding kind . . . ." The needle gets stuck again in "I believe I have seen just about every possible shade of color possible." The needle halts, frees itself, and gets stuck again in this bit of student prose: ". . . there would be an unlimited use for them in electronic circuits—with a few limitations." But the needle, without pausing, grinds screechingly away in the following sentence: "This is an example of an example of an eye catching photograph."

In addition to the preceding exhibits, the Museum maintains others designed to show the rich varieties of morbidity. The "Dangling Verbal" collection, for example, yields the following items: "Upon sitting up in my bed in walked three Yankees all talking at the same time"; and "The hot chile and warmed up crackers really hit the spot after having sat at a football game over 2 hours." The "Rainbow Manuscript Display" contains themes in blue, black, red, green, and almost invisible ink. Nor is the variety limited to the multi-hued collection as a whole, for the individual paper may shift abruptly from one color of ink to another.

Almost frightening is the array of clasps, pins (including one hairpin), clips, and staples that have been used by student-authors to fasten their pages together. Such devices make the correction of freshman themes something of a hazard for the instructor even before he exposes himself to the dangers of the prose itself. Ingenious pre-mechanical methods of fastening pages together are also preserved by the Museum. In the showcases are papers held together by folds ranging from the simple dog-eared flap to the turned-down corner secured with an intricate paper knot.

Here may be found themes with slanting edges, scalloped edges, jagged edges, and edges as frilly as old-fashioned valentines. Compositions with margins of razor-blade thinness contrast with compositions with bottom margins so high that they remind one of the soaring skirts women wore in the 1920's. The paper on which the themes are written also offers abundant variety. Here is an assignment turned in on the stationery of the insurance firm operated by the student's father. And there is a composition on "My Allergy" laboriously typed out on Kleenex!

If a teacher spends much of his time in the autumn and winter working in the Museum of Morbid English, as the instructor of Freshmen necessarily does, he is indeed ready for the coming of spring, with its promise of golden vacation days. Or, as a student phrased it more picturesquely in connection with another matter, ". . . there is one constellation, come spring and we'll thaw out"!

ROBERT L. COARD, *University of Alabama*

The Profession of College Teaching

Everett Walters' paper, "What Degree for College Teachers?", which appeared in the February issue, poses what he rightly calls "a question that demands a decisive answer."[1] Before the answer can be found, it will be necessary to re-examine the assumption that underlies our standards for faculty promotion as well as for the Ph.D. program—the assumption that scholarship and college teaching are parts of the same profession, that a man cannot be an effective teacher unless he is also a productive scholar.

In the German university of the nineteenth century, such an assumption seemed reasonable. Universities were few, and professorships rare. Anyone aspiring to a chair could appropriately be required to give evidence of having made a major contribution to knowledge. Today, in the United States, any such assumption is made increasingly untenable by the sheer magnitude of the profession. Already, a quarter of a million men and women teach in our colleges and universities; by a conservative estimate, there will be 500,000 in the 1970's. If each one of these produces one scholarly book every five years, there will be 100,000 new books a year—these scholarly books alone would add up to seven or eight times the number of books of all kinds now published annually in the United States.

If each of these half-million teachers published one substantial journal article a year, we should need 10,000 different journals, each publishing fifty major articles a year. Even if so many journals could be financed, no one would have time to read all those in his field; it is extremely doubtful that the new and important ideas, reports of research, or other scholarly contributions worthy of publication in any year would require one-tenth that much space.

If a scholar is defined as one who publishes, it is obvious that the great majority of our professors are not going to be scholars. If we continue to say that they ought to be—and imply that all who do not publish are failures and should not be promoted, however well they teach—our faculties will become clogged with frustrated people who will not be effective either as scholars or as teachers.

Even if college deans and department heads continue to cling to the view that all teachers ought to publish, it seems probable, on the basis of past experience, that the half-million college teachers of the next decade will sort themselves out into the following categories:

1. Not more than 5,000, or 1 per cent, will make distinguished contributions to research or scholarship; even this number may be optimistic, for 5,000 could push back the frontiers of knowledge considerably. (This was the group for whom the Ph.D. degree was originally intended.)

2. Perhaps another 50,000, or 10 per cent, will publish regularly and voluminously and will keep the journals bulging. Their work is

[1] JOURNAL OF HIGHER EDUCATION, XXXI (February, 1960), pp. 69–74.

no doubt necessary, for they will provide the bricks and mortar of scholarship even though they will not be the architects.

3. A larger group, perhaps 100,000, or 20 per cent, will publish occasionally, particularly at times when they are about to be considered for promotion in rank. Their articles will be counted rather than read.

4. The others, about 70 per cent of the total group, will publish nothing at all after they leave graduate school. Some of these will always intend to publish as soon as they can find the time; they will go through life with feelings of failure because they were heavily indoctrinated in graduate school with the view that a man's worth is measured by his publications.

But a very large number—my guess is half the total group—will never have any intention of doing research or of publishing in scholarly journals. They will want to teach undergraduates and will take whatever degrees are required for admission to the profession. The new degree for college teachers should be planned with this group in mind. The program should be designed to bring the student closer to a total vision of reality and of truth, as well as to give him a profound understanding of an academic discipline. It should be designed to produce people who can teach undergraduates effectively, for this will be their life's work.

Which of the categories named includes the greater proportion of superior teachers? No one really knows. Those who publish have long been convinced that only they can teach well because they are "keeping up" with their fields. Those who do not publish are equally convinced that they are better teachers because they devote all their energies to teaching and preparing to teach. Since this group does not write, their opinion does not often appear in print; but it is widely held, and it may not be entirely a rationalization.

Regardless of whether productive scholars make "better" teachers, there seems little doubt that among those who do not publish there are many highly intelligent and very able teachers—individuals of a truly scholarly outlook who express their creative talents in the classroom rather than on paper. Socrates was such a man.

In *The Aims of Education*, Whitehead wrote as follows:

> It must not be supposed that the output of a university in the form of original ideas is solely to be measured by printed papers and books labeled with the names of their authors. Mankind is as individual in its mode of output as in the substance of its thoughts . . . . In every faculty you will find that some of the more brilliant teachers are not among those who publish. Their originality requires for its expression direct intercourse with their pupils in the form of lectures, or of personal discussion. Such men exercise an immense influence . . . .[2]

If college teaching is recognized as a profession related to, but distinguishable from, scholarly writing and research, it will be easier to attract into the profession the kind of teachers that Whitehead is talking about. We need all we can get, and should devise a program of

[2]Alfred North Whitehead (New York: Macmillan Company, 1959), p. 148.

graduate work specifically intended for this group. The Ph.D. can then become a stronger degree because it will be available only to those for whom it was originally intended.

Some who take the teaching degree may later make important contributions to scholarly literature, even though their graduate work did not stress research or publication. The university might grant the Ph.D. degree to these individuals, after a period of years, on the basis of their accumulated contributions to their disciplines. For example, William James might have been granted an earned Ph.D. degree on the basis of his contributions to psychology and philosophy—it wouldn't have lowered Harvard's standards at all. The fact that the contributions of such individuals are the result of individual initiative, and that their publications are prepared without the support and assistance of a faculty committee, may lead to new and higher standards for the doctoral dissertation.

PAUL WOODRING, *Fund for the Advancement of Education*

A New Degree for College Teachers

In the February issue of the JOURNAL, this writer discussed at some length the problem of an appropriate degree for college teachers.[1] The need for such a degree, it was pointed out, arises because there will not be a sufficient number of Ph.D.'s to supply the teachers required by colleges and universities in the very near future. The possibility of rehabilitating or revitalizing the present Master's degree, or of creating a new two-year named doctorate—Doctor of Geology, for example—was examined and found wanting.

The feasibility of a new two-year Master's degree, however, was not considered. Such a Master's might be designated the Master of Philosophy (M.Ph., or M.Phil.), to be awarded for the amount of graduate work now required of a student for admission to candidacy for the Ph.D., but with several important additional requirements.

Briefly stated, the degree would encompass the traditional number of credit-hours taken in two years of full-time graduate work beyond the baccalaureate. Included in these hours of advanced work would be formal course instruction, independent study, and research. Breadth as well as depth would be emphasized in the prescribed program. The residence requirement would be the same as for the Ph.D., and presumably would be sufficient to ensure the student's fellowship in a company of scholars for an extended period of time—hopefully, at least an academic year. As in the present Ph.D. program, there would be no tolerance of the student, employed full-time at a factory, air base, or nearby college, who failed to spend sufficient time with his adviser, faculty members, and other graduate students.

Similarly, the foreign-language requirement would be retained in all

[1] "What Degree for College Teachers?", XXXI (February, 1960), pp. 69–74.

its vigor—or the vigor it should have. This writer believes in the language requirement both as a research tool and as a cultural experience. The fulfillment of the language requirement should indicate not only that the student possesses the ability to translate foreign languages with facility but also that he knows something of the people of other countries. The nations of the modern world are too interdependent not to require that our college teachers and intellectual leaders have a command of foreign languages. Another traditional requirement for the doctorate, the general examination, would also be included. As here proposed, the examination would test the student's ability to relate the various concepts and understandings which he has acquired during his graduate experience and to evaluate hypotheses and draw logical conclusions. The examination would be designed to test breadth of understanding as well as depth in a particular aspect of the subject of his major field.

It would be assumed from the outset that a student holding the M. Phil. could submit a dissertation which, if accepted by a properly constituted committee of the graduate school, would entitle him to the Ph.D. The requirements for the new degree would not be lower than those for the present Ph.D.; indeed, they would be the same except for the dissertation.

Since this proposed degree is designed for college teachers, it seems only logical that there be some specific professional training in teaching. Graduate deans, college presidents, college deans, professors of education, and many others have advanced suggestions concerning the nature of this training, some in quite specific terms. Several extreme proposals have even called for what would amount to the establishment of schools of education at the graduate level. According to these suggestions, an appreciable amount of time should be devoted to such topics as teaching techniques, the history and philosophy of higher education, the organization of today's academic institutions, and current problems in higher education. On the other hand, the traditional stand of graduate deans and graduate faculty members has been that the student will learn to be a good teacher from being exposed to teachers for many years, from participating in seminars, and from being intimately bound up in research. Frequently, the question has been raised, as in the article by Paul Woodring in this issue of the JOURNAL (see page 280), whether the purpose of the graduate school is to prepare college teachers or to train research persons. The answer to this is not as clear as it might be, for studies have shown that many Ph.D.'s simply do not do any research after receiving their degrees, and that the Ph.D. degree has often been used as a badge for the college teacher. But in recent years, the typical student in mathematics, engineering, physics, and chemistry has headed for a career in research, not teaching.

What should constitute specific training for future college teachers is a difficult question to answer. It must be resolved by each graduate school, for practices and traditions vary. Certainly in some instances the graduate school itself may, as at Ohio State, institute courses on college teaching which acquaint graduate students with some of the

problems they will face as teachers and as members of the academic community. Every prospective teacher should be familiar with the techniques and methods of teaching his subject, with tests and measurements, and with the psychology of learning; he should also know something of the peculiar demands made on faculty members at large universities ("publish or perish," for example) and the equally peculiar demands placed upon faculty members at small colleges. It goes without saying that all students seriously interested in teaching should be required to teach several semesters under the direction of skilled teachers before they come face to face with a college class.

It would be assumed, furthermore, that the student pursuing this degree would be required to engage in sufficient research to enable him to appreciate the scholarly developments in his field. Such a requirement would fit naturally into one of the normally assigned courses. If the student did not possess a Master's degree which included a thesis, he would be required to prepare an essay at least comparable to the thesis. In geology, for example, he would have to have adequate field experience; in history, a thorough understanding of and experience in the historical method.

Such a degree unquestionably would appeal to many persons who do not wish to go forward to the Ph.D. Some might be interested in saving the time required to prepare a doctoral dissertation; others might be more interested in teaching than research. As I mentioned in my earlier article, our colleges today contain many competent teachers who have been admitted to candidacy for the Ph.D. but who have failed to write a dissertation. These A.B.T.'s (All But Thesis) would, under the terms of this proposal, receive some recognition of their scholarly accomplishments. In many fields, furthermore, it is questionable whether the doctorate is a *sine qua non* for a college teacher. In mathematics and French, for example, is it really necessary for a college teacher to have prepared a dissertation—a "contribution to knowledge"—in order to be a good teacher? Many prominent mathematicians have agreed that the highly theoretical dissertation now required by our leading departments of mathematics is not necessary for all teachers, even in the first-rate colleges. They also agree that the knowledge, training, and maturity involved in preparing for the general examination is of prime importance and that a full-year's work beyond the present Master's is needed.

As I pointed out in my earlier article, something must be done to find another satisfactory degree for the college teacher. The proposal for the Master of Philosophy degree described here is one which deserves consideration by all graduate schools and organizations of graduate deans. It offers one means of encouraging more young persons to go forward in graduate education so that they may become college teachers.

EVERETT WALTERS, *Ohio State University*

Editorial

A Promising Program

Meeting the need for college teachers during the next few decades is everywhere recognized as one of the most critical problems that higher education faces. Many different proposals have been made for meeting the need. One of the most promising attacks on the problem that we have learned about is the experimental program for teachers of engineering that is now under way at the University of Illinois.

This program is the brain child of Seichi Konzo, professor of mechanical engineering. As a means of guiding some of the best students into college teaching and training them for it, he proposed to William L. Everitt, dean of the College of Engineering, the establishment of an experimental intern program. His proposal was welcomed by Mr. Everitt, who, as president of the American Society for Engineering Education, in 1956 had set up a special Committee on the Development of Engineering Faculties.

As a result of the efforts of Messrs. Konzo and Everitt, the Ford Foundation made a grant of $207,000—one of the first Ford grants in engineering—to put the Konzo plan into operation with a pilot group of thirty students. Nine of these students are in residence at Illinois this year; more will be added next year. The nine were selected from eighty-five applicants who in June, 1959, had received Bachelors' degrees in mechanical or electrical engineering. All of them are top-ranking students: the two from the University of Illinois ranked first and second in a class of one hundred and twenty seven mechanical engineers.

The students will spend two years as interns, and are expected to earn Masters' degrees and get started on their doctorates. Each receives $2,000 a year, plus tuition and fees (and family allowances for children).

They are pursuing a threefold program: graduate study in their fields of specialization, participation in a weekly seminar, and practice in the duties of the college teacher. In the seminar, the students meet with Mr. Konzo and Ernest A. Reed, professor emeritus of electrical engineering. They participate in discussions with psychologists, research workers, engineering writers, and others, and thus learn about engineering education as a profession. The theme of the seminar for next year will be "The World of Tomorrow," since, as Mr. Konzo says, "these fellows will be teaching in the 1960's, '70's, and '80's." For practical experience,

the interns grade papers, assist with quiz sessions, and act as laboratory assistants. Each intern gets experience in each activity.

All of the interns are keenly interested in teaching, and the University hopes that most of them will become teachers. But there is no requirement that they do so. The only restriction on their work is that they cannot teach at the University of Illinois during the first five years after completing the internship program. This provision should eliminate any fear on the part of other institutions that the internship program will be used as a means of "raiding" to recruit teachers for Illinois.

This program should be of interest and value, not only to engineering educators, but to persons in other areas who are trying to meet the urgent need for college teachers.

R. H. E.

A Much-Needed Study

Harvard University is about to undertake a study that should be of great value, not only to that institution but to all colleges and universities in the United States. It will investigate "the effect of Federal funds upon its schools, laboratories, departments and teaching program."

In the 1930's, Harvard received almost nothing from government contracts and grants. As late as 1941, government money accounted for only 1.5 per cent of its budget. The amount jumped sharply upward during the Second World War and leveled off at 7.6 per cent by 1947. Since that time it has increased gradually, so that last year it amounted to nearly 20 per cent of the total budget. In some universities, the percentage is much higher.

Last month we published a statement by the Academic Freedom Committee of the American Civil Liberties Union on this subject, and called for "a searching examination of the whole matter."[1] So we welcome the newly announced study and congratulate Harvard on undertaking it. We hope that other institutions and associations will make similar studies, so that the "trend away from university autonomy" may be better understood, and appropriate measures taken.

R. H. E.

[1] JOURNAL OF HIGHER EDUCATION, XXXI (April, 1960), p. 221.

The Reporter

A FOUR-YEAR program in basic education has been established by St. Louis University. It is believed that it will be the first fully televised multi-course curriculum ever offered. The program, entitled "Community Campus," will be telecast on Saturday mornings by station KTVI, co-sponsor of the venture. One course from each of three fields—basic skills, basic appreciation, and basic knowledge—will be offered each semester over a four-year period. Each course will consist of 15 sessions. Community Campus students will be eligible to receive the University's Basic Education Certificate upon completion of a total of eighteen courses, six courses from each of the three broad fields.

THE Department of Romance Languages and Literatures of Princeton University has completed arrangements with Presses Universitaires de France, one of the largest publishing houses in France, whereby certain literary offerings of members of the department will be published in volume and distributed. The agreement is similar to one in effect at Yale University, and is in operation for the first time during the current academic year. The arrangement will enable younger members of the department, who are not yet established in the field, to have stories and manuscripts of moderate length published and distributed to the proper outlets. Such publication is not always possible in this country because the costs of printing material of moderate length in a foreign language are prohibitive. The service will be available also to members of other departments and to former members of the Princeton faculty who may now be engaged in teaching elsewhere.

A GIFT of $100,000 a year for ten years from General Foods Corporation will provide for expansion of the nutritional research laboratories of the Harvard School of Public Health. It is the largest gift ever made by any business corporation to the capital fund of Harvard University. The new four-story nutrition laboratory, where biologists and medical scientists will study the relation between human nourishment and heart disease, obesity, and other public-health problems, will be part of a projected fifteen-story research structure for the School of Public Health.

THE English Department of the University of Texas has proposed a new means of helping young people make the transition from high-school to college classrooms more smoothly. The plan includes bringing to the University each year three or four outstanding high-school English teachers who would serve nine months as "teaching associates." They would teach three freshman English classes in co-operation with the Freshman English Committee. They would offer suggestions to the University on its freshman English program, and would be expected to write a report on their University teaching experience for the

Freshman English Committee. Upon returning to their home school systems, they could give leadership to their colleagues in providing better preparation for high-school students intending to enter college. A teaching associate would serve by invitation and would be able to take a graduate course while on the campus.

A WORKSHOP in which current methods and problems of modern-foreign language teaching will be critically examined will be offered June 10–11 by the Catholic University of America. Although comprehensive in scope, the workshop will lay particular stress on language instruction in Catholic high schools and colleges. Information may be obtained from the Director of Workshops, Catholic University of America, Washington 17, D. C.

THE establishment of a new Space Sciences Laboratory on the Berkeley campus of the University of California is being planned. It will serve as an interdisciplinary facility by means of which faculty members from various departments can co-ordinate their efforts to solve a wide range of space-oriented problems. A modest basic budget has been provided by the Regents; support is expected to come chiefly from contracts with various government agencies.

FELLOWSHIPS for men and women in school systems which do not have adequate resources to support advanced training of personnel will be awarded by the Harvard Graduate School of Education during the next two years. An anonymous grant of $50,000 for the graduate training of teachers, guidance counselors, and administrators will finance the fellowships. The donor hopes that the program will attract, among others, some Negro educators of unusual promise, particularly from the South. The grant will provide five fellowships for 1960–61, and more in 1961–62. The awards will carry stipends up to $4,000 for the academic year, and $5,000 for the academic year plus the summer session. Stipends will vary according to individual need.

DURING its first two years, the Inter-University Committee on the Superior Student held two regional conferences and scheduled a third. Its representatives visited 127 campuses and attended forty-two conferences and association meetings. The mailing list for its newsletter grew to more than 6,000, and at the end of the two years was growing at the rate of about two hundred a month. It distributed hundreds of sets of "Descriptions of Honors Programs in American Colleges and Universities," as well as many mimeographed copies of addresses and reports prepared by its staff officers and others. Its newsletter carried articles on forty-nine programs for superior students in institutions across the land.

THE University of Michigan will offer a new doctoral program in development economics this fall. It is designed to increase the supply of teachers and researchers concerned with relations between the "have" and "have-not" nations of the world. To support the program, seven fellowships, financed through the National Defense Education Act, have been provided by the United States Department of Health, Education, and Welfare. The first-year fellowships provide $2,000 for each recipient, plus $400 for each dependent. They are renewable for the second and third years of the student's program, subject to satisfactory academic performance and continued appropriations by Congress.

Reviews

READING FOR LIFE, *edited by Jacob M. Price.* Ann Arbor, Michigan: University of Michigan Press, 1959. ix+271 pp. $6.00.

At the time of a random sampling made in 1957, only seventeen out of a hundred American adults were reading a book. At the same time in England, the figure was 55 per cent. Other statistics show that "Americans currently spend more money on *repairs* to their radio and television sets than they do on all kinds of books" (page 184), including the ones they don't read. In a nation thoroughly immunized against the bite of the campus Cassandra and notoriously complacent about the "high rate of literacy," such scandalous findings may have lost their shock value. But they do suggest some embarrassing conclusions. In the peaceful and prosperous U.S.A., the common reader and the common man are obviously not the same person. And that publisher's darling, the general reader, appears to be well on the way to the domain of the dodo.

Possibly all is not lost. Of American respondents with a college education, 43 per cent answered "yes" to the question on current reading, as compared with only 19 per cent for high-school graduates and only 6 per cent for those who had never gone beyond grade school. But such evidence was not encouraging enough to a group of farsighted educators from the University of Michigan. They conceived of the wise plan of dedicating the new undergraduate library at Ann Arbor in February, 1958, by sponsoring, jointly with the National Book Committee, a two-day conference on what to do about it. Why don't more undergraduates form lifetime reading habits in college? Why do so many graduates treat the degree as a permit to abandon books entirely and dedicate their lives to dividends and divots? *Reading for Life* contains the addresses of eight star performers at the conference—interspersed with summaries of discussions among thirty-seven satellites: college presidents, deans, librarians, publishers and booksellers, and assorted professors.

Anyone who has attended such a conference knows that the concentration of so much brain power doesn't necessarily guarantee a consistent level of illumination. But most of the work papers make provocative reading, and the reactions of the chorus of experts are absorbing enough, even in paraphrase, to suggest that they must have been lively at first hand.

Among the dominant notes, I list the following: August Heckscher's perceptive analysis of the social climate in America, particularly his insistence that the private act of reading admits the bearer to a community that he cannot crash by merely worshipping the going gospels of togetherness and group adjustment; Reuben A. Brower's description of a Harvard program for the slow reading of literary texts, a welcome antidote to the current overdose of books on how-to-skim-faster-in-fifteen-minutes-a-day; Robert C. Angell's comprehensive list of fiction

and non-fiction to emancipate text-bound teachers and students in the social sciences; William C. Steere's contention—in a long and rambling address—that reading is a good thing for scientists, too; and convincing papers by Harold K. Guinzburg and Ralph E. Ellsworth on the vital roles respectively of the exciting new bookstores and libraries. Lester Asheim supplies a useful survey of recent research on reading and an intelligent summary of the conference conclusions. Jacob M. Price deserves special commendation for compressing two days' worth of talks and talk into a compact, readable volume.

It is doubtful that *Reading for Life* will convert any of the 80-odd per cent of the adults in America who are presumably not reading a book this year, or even a book review urging them to read a book. Many of them are busy movable types who can't find time to read print. Nor would they see any irony in the fact that William Caxton, a busy international merchant and foreign diplomat in an age that did not extol the gospel of leisure, found time to teach himself the art of printing. But it is consoling to think that this book may fall into the hands of trustees, presidents, and professors of colleges in which the bookstore's function is confined to the semi-annual unloading of textbooks and the squalid library is defended only as the "laboratory of the liberal-arts" student. For them, this book should be required reading for life.

W. W. Watt
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The Biological Way of Thought, *by Morton Beckner.* New York: Columbia University Press, 1959. viii+200 pp. $6.00.

The author's selection of examples of explanation and concept formation in biology admirably serves his thesis that the analysis of scientific method has suffered from an undue preoccupation with physical science. His discussion of models, systematics, genetic analysis and explanation, functional analysis in morphology and in animal behavior, teleological systems, and selection theory and organization is free of errors stemming from a lack of knowledge of the fundamental empirical material, and it is also free of overinvolved philosophical terminology. The result is a concise and lucid analysis, based on well-constructed definitions, which deserves a wide audience; and it is especially to be recommended to professional biologists. The logical properties of concepts which, although not restricted to biology, are characteristic of the science are dealt with in the categories of polytypic concepts (especially taxonomic), historical (including genetic and developmental), and functional (with special reference to teleological).

The first half of the volume demonstrates the precision attainable by the analyses presented, including the proper role of models as logical devices. As such, it is an excellent source for the education of biology students. The balance of the presentation involves primarily the logical peculiarities of teleological language which, for the purpose of analysis, require close definition. Some empiricists might prefer a modified argument under this section. The author assumes "that people who think that teleological language ought to be eliminated from science are disturbed by the spirit and not merely the letter of this language" (page 128). "The important point is to see how the logical character of teleological formulations aids in biological enquiry" (page 129). Whereas he states that philosophers have "overestimated the amount of illicit suggestions embodied in teleological formulations" (page 129), he maintains that teleological

analyses ought to be denied the title "explanation." He finds that "the development of a biological theory, consisting of . . . a system of laws of increasing generality, is unlikely to be substantially implemented . . . by the quest for teleological explanations" (page 154). On the other hand,

> a good teleological explanation provides both a way of filling gaps in the process for which direct evidence may be missing, and, by way of the model subsidiary hypothesis, a way of inferring-some things about environmental changes which accompany the directive process (page 155).

This topic is resumed under evolution theory in the discussion of which he points out that

> differential reproduction is the important factor in evolution, and that consequently adaptation to the environment is relevant to evolution only in so far as it is necessary for reproduction at all . . . . This definition . . . pinpoints the stage at which the biologist may break off the chain of functional analyses, since any further analysis will yield no information usable in evolution theory itself. . . . The most important use of functional analysis in evolution theory lies in its provision of data for use in selectionist models (page 169).

The author believes that he has given consideration to the suggestions of organismic biology but that his study arrives at some emphases that are in a sense antithetical to the organismic point of view. He notes that the wide use of the term "organizing relation" is a residue of the tendency to endow organization with all the mysteries of life itself.

> But a relation is just a relation, not an agent. The bare recognition that there are relations between things that obtain only in virtue of the way they are organized provides neither a science nor the foundation of one. Put another way, we can say that the concept of organization itself plays no role within a science (page 180).

For many biologists, these conclusions would appear less abrupt if the exposition relating to "directiveness" as developed throughout the book were restated in summary form, and if the characteristics of a teleological system (pages 139–41) and their relation to feedback mechanisms were developed more thoroughly. With the emergence of "molecular biology," many new examples of reproduction and molecular organization are appearing which, it is to be hoped, will provide the author with further opportunities to illustrate his analyses in an approximation of the methods of the physical sciences.

William L. Doyle
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Who Goes to Graduate School?, *by George L. Gropper and Robert Fitzpatrick*. Pittsburgh: American Institute for Research, 1959. vi+66 pp.

This is a study of 3,581 students from thirty-five representative colleges. They typify various major subjects, socio-economic classes, and academic levels. Who goes to graduate school? "Mostly men with high college grades . . . whose fathers have high occupational status and educational attainment, but undistinguished incomes" (page 56).

Why do people go to graduate school? They go primarily because of career objectives (49 per cent), and secondarily because of the desire to enlarge their education (21 per cent) or as a result of the influence of people and experiences (14 per cent). Women tend to be influenced more by educational considerations than men are, and less by vocational considerations. The higher the undergraduate grade average, the weaker is the emphasis on career aims and the greater on educational considerations. Who influences students to undertake graduate study? Over half say "Nobody," though faculty members who were

questioned thought they had a much larger influence than students acknowledged. On the other hand, undergraduate students who are encouraged by the faculty to teach part time or assist in research are much more likely to undertake graduate study than they otherwise would be. Other factors influencing the decision to go to graduate school are academic aptitude, cultural background, undergraduate majors, and (for men, but not for women) paternal education and occupation (but not income). Although religious affiliation per se does not seem to influence directly the choice to go to graduate school, "cultural differences associated with religious backgrounds apparently do exert an influence" (page 30).

Why don't more people go to graduate school? Chiefly because of lack of money, lack of vocational necessity, or lack of motivation from home or college. Financial inadequacy "appears to be a major problem for those who are planning advanced education, those who are undecided, and those who are planning not to take advanced education" (page 17).

What factors influence the choice of major subject? Here, the influence of the faculty is acknowledged to be greater than on the decision to continue formal study. Once the major subject is chosen, that subject itself influences both the decision about whether to do graduate work and what career to choose. For instance, most majors in physics plan graduate work, whereas few in engineering do; most English and history majors plan to teach, whereas few majors in the physical sciences do.

Why choose a particular graduate school? The three main factors that determine this choice are the academic reputation of the school, the recommendation of others, and the financial aid available.

When do students decide to go to graduate school? Usually, during their junior and senior years of college (51 per cent), but in many cases (28 per cent) not until after they have been out of college a while. As a rule, men decide earlier than women. About one-third of the students with relatively low undergraduate grade averages do not decide on graduate study until they have been out of college a few years.

What are the characteristics of those who go to graduate school? Graduate students generally (but not always) come from homes of higher socio-economic status than those who do not take advanced degrees; but 63 per cent of graduate students have to earn part or all of their graduate-school expenses or else receive major help from scholarships.

Educational surveys are a dime a dozen and frequently aren't worth more than that. This one by Gropper and Fitzpatrick is one of the good surveys, based on familiarity with a vast body of relevant educational literature and a full awareness of biases inherent in opinion-surveys, which it makes some effort to correct. As the authors themselves imply, people are not always aware of the factors which influence their own choices, and so may unwittingly distort the real facts. Furthermore, in a period of rapidly accelerating change like the present, a survey made in 1960 would probably reveal some educational influences and practices operating now which were not as strong in 1957, when the present survey was begun. For example, prompted by the Woodrow Wilson National Fellowship Foundation, the National Defense Education Act, and the organized efforts of such groups as the Association of Graduate Schools and the Council on Graduate Work of the Association of Land-Grant Colleges and State Universities, faculty members are now more deeply in-

volved in encouraging graduate work than they were a few years ago, and so their influence probably would prove to be larger if Gropper and Fitzpatrick were to make a similar survey in 1960. The basic facts of their survey remain informative, interesting, and reliable.

HERMAN E. SPIVEY
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COLLEGE TESTING: A GUIDE TO PRACTICES AND PROGRAMS, *by the Committee on Measurement and Evaluation of the American Council on Education*. Washington, D.C.: American Council on Education, 1959. x+190 pp. $3.00.

The Committee's purpose in writing this book was to prepare a manual for teachers, and others not expert in testing, which covered the principal characteristics and uses of tests for admissions, placement, and instruction. The book is designed to serve people in higher education who would like to make greater use of evaluation instruments and yet who know relatively little about either their potential or their limitations.

Part I, written by staff members of the Educational Testing Service, discusses the role of measurement in relation to educational problems of colleges. Part II, "Descriptions of Selected College and University Testing Programs," is the product of individual authors representing seven different testing programs.

The seven chapters of Part I are written with a simplicity which reflects the high level of sophistication of the authors. The chapter on "The Use of Tests in Instruction" is especially good. The section on growth is also very well done. In the discussion of the use of tests as growth measures, the treatment of the concept of regression toward the mean is an outstanding example of the ability of the authors to write about difficult statistical concepts in language which the layman can understand. The section on the use of tests to evaluate teaching materials and procedures would have benefited from some detailed examples illustrating how instructors were helped in evaluating their practices. The role of tests in stimulating and guiding learning is excellently handled. The sections on the development of local examinations and on the statistical analysis of student responses contain an informative discussion of the analysis of tests, including item analysis and the concepts of the difficulty and discriminating power of an item.

Chapter V, "The Use of Tests in Educational Counseling," is also an excellent one. Particularly good is the use of the example of college X. The analysis of the causes of student difficulties there serves to make specific some of the ideas discussed in the chapter. The discussion centers first on the determination of counseling needs, next views counseling problems in terms of academic class-levels, and then presents several special types of counseling cases: students with academic deficiencies, gifted students, and students with emotional problems. Students coming from a culturally impoverished background and foreign students are mentioned as others who may have difficulty in college. The interpretation of tests and other data in educational counseling is a little weak, too much space being devoted to the use of norms at the expense of a presentation of the integration of test data in the counseling process.

The chapter on the use of tests in institutional evaluation outlines several designs for evaluating the extent to which an institution's educational goals are being realized. It would have been desirable in this section to call attention to the work of McConnell, Nevitt Sanford, and their colleagues.

The discussion which deals with the reporting of test scores to students and faculty is inadequately handled. It underestimates the difficulty students, parents, and faculty encounter in trying to grasp the meaning of test scores as they are usually reported. Merely giving raw and normative scores, even though the norm groups are described adequately, is not the best way of ensuring understanding on the part of the recipient of the test scores. An explanation of techniques of interpreting test data should be made to the individuals and groups concerned.

Part II consists of descriptions of seven selected college and university testing programs: Chatham College, the College of the University of Chicago, Dartmouth College, the College of Arts and Sciences of the University of Louisville, the Student Counseling Bureau of the University of Minnesota, Pasadena City College, and San Francisco State College. The seven chapters, each by a representative of one of the institutions listed, are very well written and provide good descriptions of testing programs. It would have been helpful had the authors of Part I of this book chosen examples from the colleges written about in Part II. If the purpose of Part II is to stimulate thinking about possible testing programs, the unique approach of the University of Washington should have been included.

The seven institutions selected represent a variety of forms of organization for the administration of testing programs and many different types of college, large and small, private and public. The programs of all the colleges discussed appear to be well formulated to meet institutional objectives and to be well evaluated. The emphasis in the discussions, with the exception of that of Ralph Berdie, is on admission, placement, and institutional-evaluation uses of tests, with minor emphasis on counseling. On the other hand, the program of the Student Counseling Bureau of the University of Minnesota illustrates in detail the use of tests in counseling.

A major finding of Part II is that activity in test construction is directly related to size of institution. Small institutions usually lack the resources to devote to the construction of specialized tests. They rely heavily upon nationally standardized and published tests, although local norms are usually devised. On the other hand, large institutions such as San Francisco State College, the University of Chicago, and the University of Minnesota have devoted considerable time and money to devising tests to meet the special purposes of the institutions. This is as it should be. Institutions with the necessary resources should engage in test-construction activity so that testing will advance on many fronts and retain the flexibility it needs to be a tool for the improvement of education. Another interesting finding is that testing plays a very active role in those colleges which have general-education programs. It is to be hoped that areas of higher education which are not directly concerned with general education will devote as much time to critical self-analysis.

This book deserves to be widely read. It is the best lay discussion the reviewer has seen of the use of tests in higher education. Professional testers will find it particularly useful on college campuses in their work with faculty members. It is excellent reading material for members of governing boards, as well as for high administrative officials in colleges and universities. Deans and department heads should have copies of this book to acquaint them with the way in which testing can help meet educational objectives.

WILBUR L. LAYTON
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